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LOGINID:ssptayvv1621

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	MAR 31	IFICDB, IFIPAT, and IFIUIDB enhanced with new custom IPC display formats
NEWS	3	MAR 31	CAS REGISTRY enhanced with additional experimental spectra
NEWS	4	MAR 31	CA/CAPplus and CASREACT patent number format for U.S. applications updated
NEWS	5	MAR 31	LPCI now available as a replacement to LDPCI
NEWS	6	MAR 31	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	7	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	8	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	9	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	10	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	11	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	12	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	13	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	14	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	15	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	16	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS	17	JUN 25	CA/CAPplus and USPAT databases updated with IPC reclassification data
NEWS	18	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS	19	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
NEWS	20	JUN 30	STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in
NEWS	21	JUN 30	STN AnaVist enhanced with database content from EPFULL
NEWS	22	JUL 28	CA/CAPplus patent coverage enhanced
NEWS	23	JUL 28	EPFULL enhanced with additional legal status information from the epoline Register
NEWS	24	JUL 28	IFICDB, IFIPAT, and IFIUIDB reloaded with enhancements
NEWS	25	JUL 28	STN Viewer performance improved
NEWS	26	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS	27	AUG 13	CA/CAPplus enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS	28	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS	29	AUG 15	CAPplus currency for Korean patents enhanced
NEWS	EXPRESS	JUNE 27 08	CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS      STN Operating Hours Plus Help Desk Availability  
NEWS LOGIN      Welcome Banner and News Items  
NEWS IPC8       For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 10:16:11 ON 21 AUG 2008

```
=> file reg
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                               ENTRY      SESSION
FULL ESTIMATED COST          0.21        0.21
```

FILE 'REGISTRY' ENTERED AT 10:16:25 ON 21 AUG 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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STRUCTURE FILE UPDATES: 20 AUG 2008 HIGHEST RN 1042337-34-7  
DICTIONARY FILE UPDATES: 20 AUG 2008 HIGHEST RN 1042337-34-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

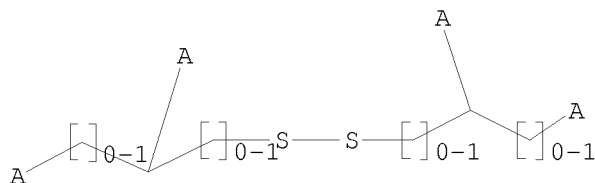
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\9312351-RCE.str

L1            STRUCTURE UPLOADED

=> d l1  
L1 HAS NO ANSWERS  
L1            STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 10:16:42 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 405897 TO ITERATE

0.5% PROCESSED 2000 ITERATIONS 3 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*INCOMPLETE\*\*  
BATCH \*\*INCOMPLETE\*\*  
PROJECTED ITERATIONS: 8081333 TO 8154547  
PROJECTED ANSWERS: 10696 TO 13656

L2 3 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 10:16:46 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 8125569 TO ITERATE

6.9% PROCESSED 564096 ITERATIONS 80 ANSWERS  
11.3% PROCESSED 918723 ITERATIONS 132 ANSWERS  
12.3% PROCESSED 1000000 ITERATIONS 133 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.41

FULL FILE PROJECTIONS: ONLINE \*\*INCOMPLETE\*\*  
BATCH \*\*INCOMPLETE\*\*  
PROJECTED ITERATIONS: 8125569 TO 8125569  
PROJECTED ANSWERS: 982 TO 1178

L3 133 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	178.82	179.03

FILE 'CAPLUS' ENTERED AT 10:17:33 ON 21 AUG 2008

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FILE COVERS 1907 - 21 Aug 2008 VOL 149 ISS 8

FILE LAST UPDATED: 20 Aug 2008 (20080820/ED)

Caplus now includes complete International Patent Classification (IPC)

reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply.  
They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> s 13

L4 29 L3

=> s 14 not py > 2000

9064377 PY > 2000

L5 0 L4 NOT PY > 2000

=>

=>

=>

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

38.60

217.63

FILE 'REGISTRY' ENTERED AT 11:03:23 ON 21 AUG 2008

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STRUCTURE FILE UPDATES: 20 AUG 2008 HIGHEST RN 1042337-34-7

DICTIONARY FILE UPDATES: 20 AUG 2008 HIGHEST RN 1042337-34-7

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experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\9312351-RCE-2.str

L6 STRUCTURE UPLOADED

=> d 16

L6 HAS NO ANSWERS

L6 STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> s 16

SAMPLE SEARCH INITIATED 11:03:56 FILE 'REGISTRY'



SAMPLE SCREEN SEARCH COMPLETED - 1552 TO ITERATE

100.0% PROCESSED 1552 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 28677 TO 33403  
PROJECTED ANSWERS: 7171 TO 9629

L7 50 SEA SSS SAM L6

=> s 16 full  
FULL SEARCH INITIATED 11:04:03 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 31958 TO ITERATE

100.0% PROCESSED 31958 ITERATIONS 9217 ANSWERS  
SEARCH TIME: 00.00.01

L8 9217 SEA SSS FUL L6

=> file caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 178.36 395.99

FILE 'CAPLUS' ENTERED AT 11:04:08 ON 21 AUG 2008  
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=> s 18  
L9 30679 L8

=> file reg  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 0.96 396.95

FILE 'REGISTRY' ENTERED AT 11:05:28 ON 21 AUG 2008

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STRUCTURE FILE UPDATES: 20 AUG 2008 HIGHEST RN 1042337-34-7  
DICTIONARY FILE UPDATES: 20 AUG 2008 HIGHEST RN 1042337-34-7

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on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\9312351-RCE-not.str

L10 STRUCTURE UPLOADED

=> s l10

SAMPLE SEARCH INITIATED 11:06:06 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1552 TO ITERATE

100.0% PROCESSED 1552 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 28677 TO 33403  
PROJECTED ANSWERS: 2161 TO 3599

L11 50 SEA SSS SAM L10

=> s l10 full

FULL SEARCH INITIATED 11:06:12 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 31958 TO ITERATE

100.0% PROCESSED 31958 ITERATIONS 3153 ANSWERS  
SEARCH TIME: 00.00.01

L12 3153 SEA SSS FUL L10

=> s l8 not l10

L8 MAY NOT BE USED HERE

The L-number entered was not created by a STRUCTURE or SCREEN command.

=> s l8 not l12

L13 6064 L8 NOT L12

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION

FULL ESTIMATED COST

178.82

575.77

FILE 'CAPLUS' ENTERED AT 11:06:48 ON 21 AUG 2008  
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FILE COVERS 1907 - 21 Aug 2008 VOL 149 ISS 8  
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=> s l13

L14 25083 L13

=> s l14 not py > 1998

10760041 PY > 1998

L15 17378 L14 NOT PY > 1998

=> d l15 ibib and hitstr 1-30

'AND' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB

ALL ----- BIB, AB, IND, RE

APPS ----- AI, PRAI

BIB ----- AN, plus Bibliographic Data and PI table (default)

CAN ----- List of CA abstract numbers without answer numbers

CBIB ----- AN, plus Compressed Bibliographic Data

CLASS ----- IPC, NCL, ECLA, FTERM

DALL ----- ALL, delimited (end of each field identified)

DMAX ----- MAX, delimited for post-processing

FAM ----- AN, PI and PRAI in table, plus Patent Family data

FBIB ----- AN, BIB, plus Patent FAM

IND ----- Indexing data

IPC ----- International Patent Classifications

MAX ----- ALL, plus Patent FAM, RE

PATS ----- PI, SO

SAM ----- CC, SX, TI, ST, IT

SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
SCAN must be entered on the same line as the DISPLAY,  
e.g., D SCAN or DISPLAY SCAN)

STD ----- BIB, CLASS

IABS ----- ABS, indented with text labels

IALL ----- ALL, indented with text labels  
 IBIB ----- BIB, indented with text labels  
 IMAX ----- MAX, indented with text labels  
 ISTD ----- STD, indented with text labels  
  
 OBIB ----- AN, plus Bibliographic Data (original)  
 OIBIB ----- OBIB, indented with text labels  
  
 SBIB ----- BIB, no citations  
 SIBIB ----- IBIB, no citations  
  
 HIT ----- Fields containing hit terms  
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
                   containing hit terms  
 HITRN ----- HIT RN and its text modification  
 HITSTR ----- HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 HITSEQ ----- HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 KWIC ----- Hit term plus 20 words on either side  
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.  
 ENTER DISPLAY FORMAT (BIB):end

=> d 115 ibib and hitstr  
 'AND' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

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ABS ----- GI and AB  
 ALL ----- BIB, AB, IND, RE  
 APPS ----- AI, PRAI  
 BIB ----- AN, plus Bibliographic Data and PI table (default)  
 CAN ----- List of CA abstract numbers without answer numbers  
 CBIB ----- AN, plus Compressed Bibliographic Data  
 CLASS ----- IPC, NCL, ECLA, FTERM  
 DALL ----- ALL, delimited (end of each field identified)  
 DMAX ----- MAX, delimited for post-processing  
 FAM ----- AN, PI and PRAI in table, plus Patent Family data  
 FBIB ----- AN, BIB, plus Patent FAM  
 IND ----- Indexing data  
 IPC ----- International Patent Classifications  
 MAX ----- ALL, plus Patent FAM, RE  
 PATS ----- PI, SO  
 SAM ----- CC, SX, TI, ST, IT  
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
                   SCAN must be entered on the same line as the DISPLAY,  
                   e.g., D SCAN or DISPLAY SCAN)  
 STD ----- BIB, CLASS

IABS ----- ABS, indented with text labels  
 IALL ----- ALL, indented with text labels  
 IBIB ----- BIB, indented with text labels  
 IMAX ----- MAX, indented with text labels  
 ISTD ----- STD, indented with text labels  
  
 OBIB ----- AN, plus Bibliographic Data (original)  
 OIBIB ----- OBIB, indented with text labels  
  
 SBIB ----- BIB, no citations  
 SIBIB ----- IBIB, no citations  
  
 HIT ----- Fields containing hit terms  
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
                   containing hit terms  
 HITRN ----- HIT RN and its text modification  
 HITSTR ----- HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 HITSEQ ----- HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 KWIC ----- Hit term plus 20 words on either side  
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.  
 ENTER DISPLAY FORMAT (BIB):end

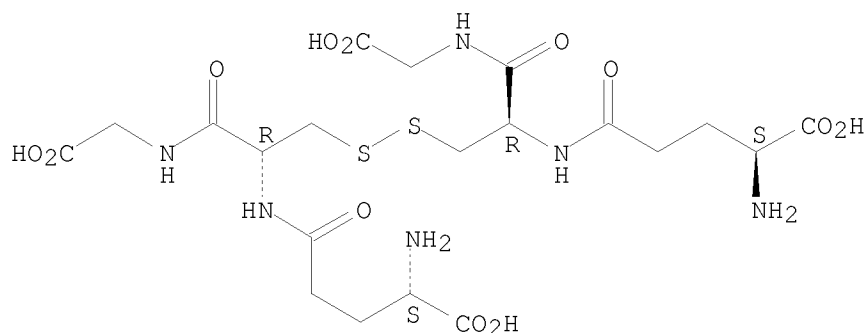
=> d 115 ibib abs hitstr 1-40

L15 ANSWER 1 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2008:943382 CAPLUS  
 TITLE: Reactive-Electrospray-Assisted Laser  
           Desorption/Ionization for Characterization of Peptides  
           and Proteins  
 AUTHOR(S): Peng, Ivory X.; Ogorzalek Loo, Rachel R.; Shiea,  
           Jentaie; Loo, Joseph A.  
 CORPORATE SOURCE: Department of Chemistry and Biochemistry and  
           Department of Biological Chemistry, David Geffen  
           School of Medicine, University of California-Los  
           Angeles, Los Angeles, CA, 90095, USA  
 SOURCE: Analytical Chemistry (Washington, DC, United States)  
           ACS ASAP  
           CODEN: ANCHAM; ISSN: 0003-2700  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Electrospray-assisted laser desorption/ionization (ELDI) is a soft  
   ionization method for mass spectrometry (MS) and combines features of both  
   electrospray ionization (ESI) and matrix-assisted laser  
   desorption/ionization to generate ESI-like multiply charged mols. The

ELDI process is based on merging ESI-generated, charged droplets with particles UV laser desorbed from dried or wet sample deposits. The authors previously reported that ELDI is amenable for MS-based protein identification of large peptides and small proteins using top-down and bottom-up techniques (Peng, I. X., et al., 2007). The authors have extended their studies by applying collisionally activated dissociation and electron-transfer dissociation MSn to protein anal. and show that ELDI is capable of multistage MS to MS4 for top-down characterization of large proteins such as 29 kDa carbonic anhydrase. Multiply charged proteins generated by the ELDI mechanism can be shifted to higher charge by increasing the organic content in the ESI solvent to denature the protein mols., or by adding m-nitrobenzyl alc. to the ESI solvent. Furthermore, the authors introduce "reactive-ELDI", which supports chemical reactions during the ELDI process. Preliminary data for online disulfide bond reduction using dithiothreitol on oxidized glutathione and insulin show reactive-ELDI to be effective. These data provide evidence that the laser-desorbed particles merge with the ESI-generated charge droplets to effect chemical reactions prior to online MS detection. This capability should allow other chemical and enzymic reactions to be exploited as online protein characterization tools, as well as extending them to flexible, spatially resolved tissue screening and imaging. Also, these reactive-ELDI disulfide reduction expts. enable direct top-down protein identification for proteomic study, side stepping laborious, time-consuming sample preparation steps such as in-solution reduction and alkylation.

IT 27025-41-8, Oxidized glutathione  
 RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)  
 (disulfide bond reduction; reactive-electrospray-assisted laser desorption/ionization for characterization of online disulfide bond reduction)  
 RN 27025-41-8 CAPLUS  
 CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide  
 (CA INDEX NAME)

Absolute stereochemistry.

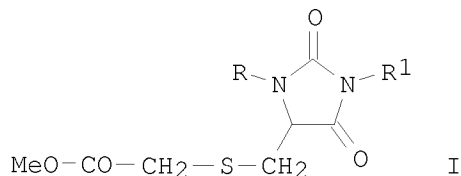


REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:308788 CAPLUS  
 DOCUMENT NUMBER: 140:303667  
 TITLE: A process for the preparation of hydantoins from amino acids and isocyanates  
 INVENTOR(S): Ravindranathan, Hottappillil; Chavan, Subhash Prataprao; Tejawani, Rajkumar Bhagwandas  
 PATENT ASSIGNEE(S): Council of Scientific and Industrial Research, India  
 SOURCE: Indian, 14 pp.

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 178927	A1	19970719	IN 1992-DE65	19920130
PRIORITY APPLN. INFO.:			IN 1992-DE65	19920130
OTHER SOURCE(S):	CASREACT 140:303667; MARPAT 140:303667			
GI				



AB A process for the preparation of racemic and chiral hydantoins I [R, R1 = H, Ph, benzyl, etc.] from the corresponding amino acid and isocyanates was disclosed. For example, to a solution of N-benzyl S-carboxymethyl L-cysteine di-Me ester (10 mmol), e.g., prepared from S-carboxymethyl L-cysteine di-Me ester and benzaldehyde in one-step, in dry toluene was added benzyl isocyanate (10 mmol) in one portion. The reaction was stirred at room temperature for 2-h., followed by the addition of p-toluenesulfonic acid (1 mmol).

The mixture was heated at reflux for 3-h, the solvent removed and the residue purified by silica gel chromatog. to furnish claimed hydantoin I [R, R1 = benzyl] in 85% yield. Compds. I are useful intermediates in the manufacture of biotin.

IT 56-89-3, Cystine, reactions

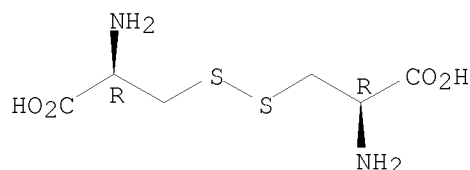
RL: RCT (Reactant); RACT (Reactant or reagent)

(process for the preparation of hydantoins from amino acids and isocyanates)

RN 56-89-3 CAPLUS

CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 3 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:946105 CAPLUS

DOCUMENT NUMBER: 139:380099

TITLE: Stabilization of Pseudomonas cysteine synthetase during L-cysteine production

INVENTOR(S): Shin, Chol-Soo; Ryu, Ok-Hee

PATENT ASSIGNEE(S): S. Korea

SOURCE: Repub. Korea, No pp. given

CODEN: KRXXFC

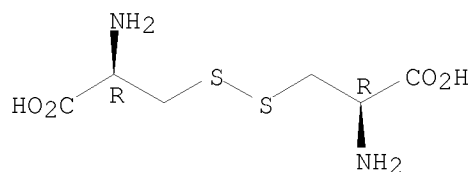
DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE -----
	KR 133990	B1	19980420	KR 1994-17767	19940722
PRIORITY APPLN. INFO.:				KR 1994-17767	19940722
AB	A method is provided to stabilize the cysteine synthetase of Pseudomonas species M-38 during the continuous production of L-cysteine and L-cystine from 2-amino-4,5-dihydro-4-thiazolecarboxylic acid. The method comprises adding sorbitol and salts selected from the group consisted of KCl, NaCl, CaSO <sub>4</sub> , (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> , and MgSO <sub>4</sub> to the substrate solution of 2-amino-4,5-dihydro-4-thiazolecarboxylic acid. This improves the stability of the cysteine synthetase, prolongs the L-cysteine production time, reduces feedback inhibition, and enables to recycling of the unreacted 2-amino-4,5-dihydro-4-thiazolecarboxylic acid.				
IT	56-89-3P, L-Cystine, preparation RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation) (stabilization of Pseudomonas cysteine synthetase during L-cysteine production)				
RN	56-89-3 CAPLUS				
CN	L-Cystine (CA INDEX NAME)				

Absolute stereochemistry.



L15 ANSWER 4 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2002:798319 CAPLUS  
DOCUMENT NUMBER: 137:357652  
TITLE: Amino acids and carbohydrates in refractory organic acids  
AUTHOR(S): Jahnel, Jutta Britta; Ilieva, Paulina; Abbt-Braun, Gudrun; Frimmel, Fritz Hartmann  
CORPORATE SOURCE: Engler-Bunte-Institut, Bereich Wasserchemie, Universitaet Karlsruhe, Karlsruhe, D-76131, Germany  
SOURCE: Vom Wasser (1998), 90, 205-216  
CODEN: VJWWAU; ISSN: 0083-6915  
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
DOCUMENT TYPE: Journal  
LANGUAGE: German

AB Refractory organic substances (ROS) in aqueous samples from different origin were

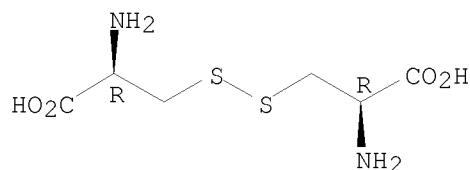
isolated on a XAD-column and amino acids and carbohydrates were released by acid hydrolysis. In the hydrolyzates 17 amino acids could be detected after pre-column derivatization and HPLC separation. Furthermore pentoses, hexoses, deoxy- and aminocarbohydrates were identified ionchromatog. using a HPAE-PAD system (High Performance Anion Exchange Chromatog. with Pulsed Amperometric Detection). The acid hydrolysis of the FA- and HA-fractions yielded amino acids and carbohydrates ≤7% of the total organic substances. An exception was the effluent of a sewage treatment plant with a yield of 29%. This relatively high amount of amino acids and carbohydrates is typical for biogenic organic matter at an early stage of the humification process. The comparison of the FA- and HA-fractions for all investigated samples, reveals a generally higher amount of amino acids and



carbohydrates in the HA-fractions. The dominating amino acids were aspartic acid, cystine, and leucine. From all investigated carbohydrates glucose, galactose, mannose, and xylose were the predominant ones. The carbohydrate pattern gives valuable information for source studies. Deoxycarbohydrates and amino-carbohydrates occur in microbial cell walls, while glucose and xylose are plant components found in cellulose and hemicellulose. Keeping this in mind, it can be concluded that the effluent of the sewage treatment plant showed a strong microbial influence, whereas the glucose and xylose in the ROS from the soil extract, bog lake water, and groundwater reflected a higher amount of plant derived matter.

IT 56-89-3, Cystine, occurrence  
 RL: OCU (Occurrence, unclassified); OCCU (Occurrence)  
 (refractory organic acids as determined by amino acid and carbohydrate occurrence in aqueous samples from different origin)  
 RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



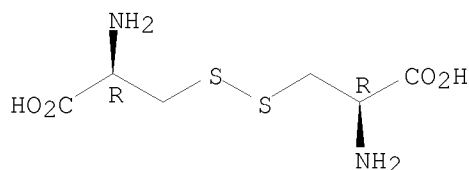
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 5 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:189660 CAPLUS  
 DOCUMENT NUMBER: 135:121462  
 TITLE: Energy and nutritional value of finely ground powders from plant raw materials  
 AUTHOR(S): Kisla, L. V.; Romanova, Z. M.; Mudrak, T. O.; Eliseeva, O. P.  
 CORPORATE SOURCE: Ukr. Derzh. Univ. Kharchovikh Tekhnol., Kiev, Ukraine  
 SOURCE: Kharchova Promislovist (1998), 43-44, 176-181  
 CODEN: PPMVAL; ISSN: 0554-2081  
 PUBLISHER: Urozhai  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Ukrainian

AB The nutrient compns. of dried and finely ground beet, carrot, cabbage, onions, and mountain ash (Sorbus) berries were examined immediately after preparation and after 8 and 12 mo of storage. The contents of dry matter, total carbohydrates, vitamin C, carotenoids, individual amino acids, nitrites, and minerals (K, Ca, Mg, Na, P, Fe, Mo, Ba, Cr, Cu, Mn, V), and dietary energy were determined. The powders can be suitable additives for selected food products and dietary supplements.

IT 56-89-3, Cystine, biological studies  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
 (nutrient compns. of finely ground powders from beet, carrot, cabbage, onions and mountain ash (Sorbus) berries)  
 RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 6 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:189621 CAPLUS

DOCUMENT NUMBER: 135:121461

TITLE: Structural transformations of protein fractions of amaranth during freezing

AUTHOR(S): Simakhina, G. O.

CORPORATE SOURCE: Ukr. Derzh. Univ. Kharchovikh Tekhnol., Kiev, Ukraine

SOURCE: Kharchova Promislovist (1998), 43-44, 17-22

CODEN: PPMVAL; ISSN: 0554-2081

PUBLISHER: Urozhai

DOCUMENT TYPE: Journal

LANGUAGE: Ukrainian

AB Amaranth seed proteins were isolated and fractionated by the Osborn method into albumins soluble in water, globulins soluble in salt solns., glutelins soluble

in alkaline solns., and prolamins soluble in 70% aqueous ethanol. The proteins were

fractionated in seeds before and after freezing to -18°C and after

30 days of frozen storage. The amino acid composition of individual fractions was determined

IT 56-89-3, Cystine, biological studies

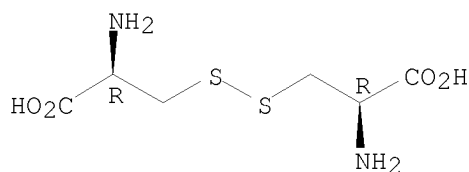
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)

(amino acid composition of fractions of amaranth seed proteins before and after freezing to -18°C)

RN 56-89-3 CAPLUS

CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 7 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:189613 CAPLUS

DOCUMENT NUMBER: 135:121460

TITLE: Biochemical components of amaranth and their role in nutrition

AUTHOR(S): Simakhina, G. O.

CORPORATE SOURCE: Ukr. Derzh. Univ. Kharchovikh Tekhnol., Kiev, Ukraine

SOURCE: Kharchova Promislovist (1998), 43-44, 8-12

CODEN: PPMVAL; ISSN: 0554-2081

PUBLISHER: Urozhai

DOCUMENT TYPE: Journal

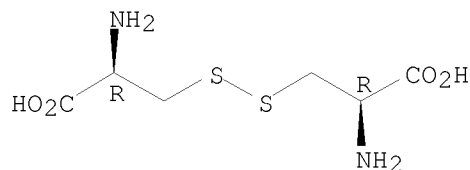
LANGUAGE: Ukrainian

AB The nutrient composition of white, rose, and black seed amaranth growing in Ukraine was examined The levels of dietary proteins, lipids. carbohydrates,

ash, total N, individual amino acids, chlorophyll, and vitamins were determined  
The amaranth seed appears to be a rich nutrient source suitable for  
processing and inclusion into dietary supplements.

IT 56-89-3, Cystine, biological studies  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); FFD  
(Food or feed use); BIOL (Biological study); OCCU (Occurrence); USES  
(Uses)  
(nutrient composition of amaranth seed and possible use in dietary  
supplements)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



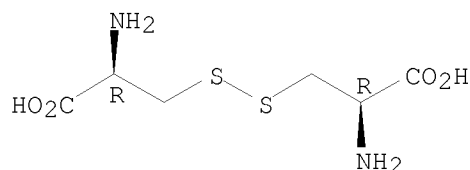
L15 ANSWER 8 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2000:644111 CAPLUS  
DOCUMENT NUMBER: 133:192433  
TITLE: Processing method of salted anchovies  
INVENTOR(S): Shin, Jae-ik; Choe, Soo-bok; Lee, Seung-ryul; Kim,  
Jin-ha; Cho, Sam-rae; Sim, Sun-taek  
PATENT ASSIGNEE(S): Nong Sim Co., Ltd., S. Korea  
SOURCE: Repub. Korea, No pp. given  
CODEN: KRXXFC  
DOCUMENT TYPE: Patent  
LANGUAGE: Korean  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 9614610	B1	19961016	KR 1993-30198	19931228
PRIORITY APPLN. INFO.:			KR 1993-30198	19931228

AB The salted anchovy sauce is prepared by (1) adding 40-60wt.% pure water, and  
the precursors of Maillard reaction containing 0.1-1.0 weight% fructose syrup,  
0.1-0.8 weight% thiamin hydrochloride salt, 0.1-0.8 weight% L-cystine, and  
0.1-0.6 weight% DL-methionine into 100 weight% pickled anchovy, (2) heating the  
obtained mixture at 100° for 60 min. with stirring, and (3) filtering  
it to obtain the final product.

IT 56-89-3, L-Cystine, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(processing method of salted anchovies)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 9 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:595378 CAPLUS

DOCUMENT NUMBER: 134:16972

TITLE: N-Acetylcysteine protects from glutathione depletion in rats exposed to hyperoxia

AUTHOR(S): Shattuck, Karen E.; Rassin, David K.; Grinnell, Chali D.

CORPORATE SOURCE: Department of Pediatrics, University of Texas Medical Branch, Galveston, TX, 77555-0526, USA

SOURCE: JPEN, Journal of Parenteral and Enteral Nutrition (1998), 22(4), 228-233  
CODEN: JPENDU; ISSN: 0148-6071

PUBLISHER: American Society for Parenteral and Enteral Nutrition

DOCUMENT TYPE: Journal

LANGUAGE: English

AB N-acetylcysteine (NAC) may protect against oxidative injury by providing cysteine for glutathione (GSH) biosynthesis or by direct reactions with electrophiles. We have recently shown that hyperoxic exposure of rats prior to liver perfusion is associated with significant decreases in hepatic GSH and significant changes in biliary amino acid concns. We hypothesized that NAC administration during hyperoxic exposure would prevent depletion of hepatic GSH by providing cysteine for GSH biosynthesis. NAC was administered during 2 conditions known to induce GSH depletion: hyperoxic exposure and biochem. inhibition of GSH synthesis using buthionine sulfoximine (BSO). After 48 h, GSH concns. in bile, liver and perfusate and biliary amino acid concns. were determined using isolated perfused liver preps. Administration of NAC to rats maintained in normoxic or hyperoxic conditions, prior to liver perfusion, resulted in dose-dependent increases in GSH concns. in bile, liver and perfusate, increases in bile flow rates and changes in biliary amino acid concns. When BSO was given concurrently with NAC in normal or hyperoxic conditions, these effects were not observed, and oxidant stress was evident. Thus, NAC prevents oxidant stress during hyperoxic exposure, most likely by supplying cysteine as a precursor for GSH synthesis.

IT 27025-41-8, GSSG

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

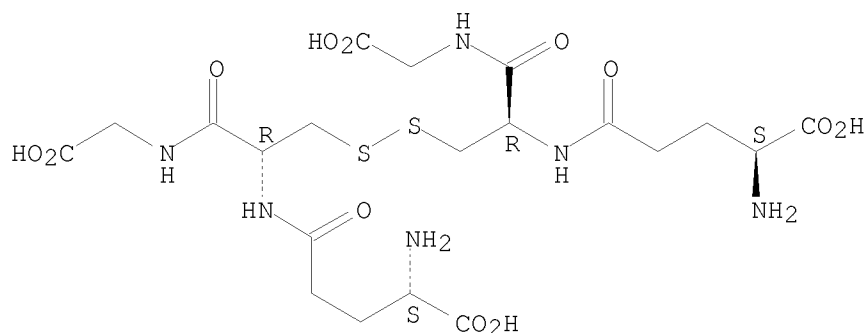
BIOL (Biological study); OCCU (Occurrence)

(N-acetylcysteine protects from glutathione depletion in rats exposed to hyperoxia)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2000:516466 CAPLUS

DOCUMENT NUMBER: 133:148563

TITLE: The mechanism of the form a of aldose reductase formation in diabetes mellitus. The probable regulation of the enzyme activities in the result of the impairments of the thiol/disulfide exchange in diabetes mellitus

AUTHOR(S): Rabinovich, S. E.; Shono, N. I.; Platonova, L. V.; Dyuzheva, T. G.; Gal'perin, E. I.

CORPORATE SOURCE: Mosk. Med. Akad. im. I. M. Sechenova, Moscow, 119881, Russia

SOURCE: Voprosy Meditsinskoi Khimii (1997), 43(2), 104-111  
CODEN: VMDKAM; ISSN: 0042-8809

PUBLISHER: NII Biomeditsinskoi Khimii

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Incubation of form b ( $K_m$  3.0-4.0 mM;  $V_{max}$  4.38±0.6 mU/OD280) of aldose reductase (AR; E.C.1.1.1.21.) from human red cells in the oxygen radical generating system or treatment by excess concns. of GSSG (10 mM) caused the increase of specific activity ( $V_{max}$  10.0 mU/OD280), increase of the affinity for D-Glucose ( $K_m$  25.4 mM) and alterations of the chromatog. properties of the enzyme. The modified form b of AR has very similar properties with form a of this enzyme ( $K_m$  6.5-19.0 mM;  $V_{max}$  16.7±3.2 mU/OD280), that had been found in red cells in patients with diabetes mellitus. The treatment of the modified form b or form a by GSH (10 mM) caused the appearance of the AR form that has very similar properties with form b. On the bases of these results the main role of SH-groups of AR in the interconversion of forms b and a is concluded. It is suggested that the increase of the lipid peroxidn. may be one of the causes of the formation of AR form a, because the product of the lipid peroxidn. can oxidize the SH-groups of the protein and enzymes or cause the increase of GSSG in the cell. Alteration of the properties of the carbohydrate-metabolizing enzymes resulting from the impairment of thiol/disulfide exchange in diabetes mellitus is discussed.

IT 27025-41-8, GSSG

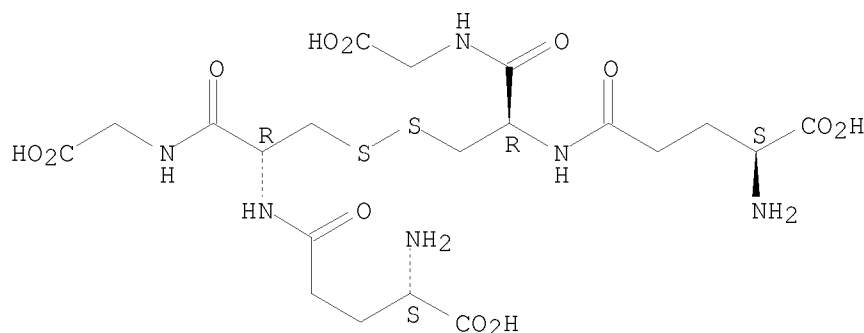
RL: ADV (Adverse effect, including toxicity); BPR (Biological process);  
BSU (Biological study, unclassified); BIOL (Biological study); PROC  
(Process)

(aldose reductase associated with carbohydrate metabolism and reactive oxygen species formation in relation to diabetes mellitus in human)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



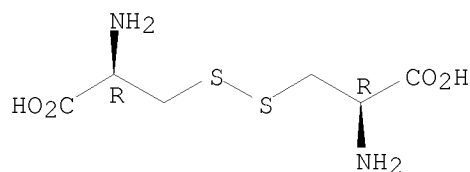
L15 ANSWER 11 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:442617 CAPLUS  
 DOCUMENT NUMBER: 134:120753  
 TITLE: Amino acids of proteins of Padus avium  
 AUTHOR(S): Fadeeva, N. V.; Rubchevskaya, L. P.; Repyakh, S. M.  
 CORPORATE SOURCE: Sib. Gos. Tekhnol. Univ., Krasnoyarsk, Russia  
 SOURCE: Khimiya Rastitel'nogo Syr'ya (1998), (2), 49-51  
 CODEN: KRSHC4; ISSN: 1029-5151  
 PUBLISHER: Izdatel'stvo Altaiskogo Gosudarstvennogo Universiteta  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

AB The object of research was served by (with) wood greens bird cherry tree ordinary *Padus avium* Mill, prepared during flowering. The purpose of the study consisted of identifying amino acid composition of proteins of *P. avium* inflorescences and sprouts. The plant is a potential source biol. of biol. active substances.

IT 56-89-3, L-Cystine, biological studies  
 RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)  
 (amino acids of proteins of *Padus avium*)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 12 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:381173 CAPLUS  
 DOCUMENT NUMBER: 133:277477  
 TITLE: Response of phenolic compound on yield and quality traits of green gram (*Vigna radiata* L. Wilczek)  
 AUTHOR(S): Singh, A. B.; Awasthi, C. P.; Abidi, A. B.  
 CORPORATE SOURCE: Indian Institute of Soil Science, Bhopal, 462038, India  
 SOURCE: Indian Journal of Agricultural Biochemistry (1998), 11(2), 47-49  
 CODEN: IJBIEG; ISSN: 0970-6399  
 PUBLISHER: Indian Society of Agricultural Biochemists  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

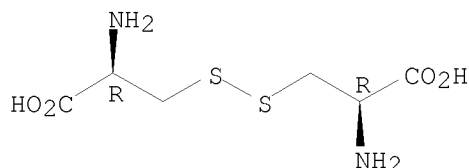
AB A field experiment was conducted to assess the response of phenolic compds. on yield and quality of green gram. The study showed significant variation in the nutritional quality parameters viz. protein, carbohydrates, total ash, tryptophan, methionine and cystine content ranging from 23.6 to 26.4, 56.2 to 60.0, 3.5 to 4.0 percent and 0.80 to 1.60, 0.96 to 1.76, 0.96 to 1.60 g/16 N, resp., in the dry mature seeds. Besides, wide variability in the yield attributing characters such as plant height, number of branches, Number of seeds/pod and 100-seed weight was also recorded which varied from

42.2 to 46.1 cm./plant, 9.3 to 15.2 branches/plant, 8.0 to 11.8 seeds/pod and 38.1 to 42.5 g/100 seeds, resp. on application of various phenolic compds. Substantial enhancement in the seed yield to the extent of 20% (14.0 to 18.4 q/ha) was noticed over treatments on application of 10 ppm  $\beta$ -naphthol followed by 5 ppm concns. each of salicylic acid and

tannic acid.

IT 56-89-3, Cystine, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(phenolic compds. effect on yield and quality traits of green gram)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



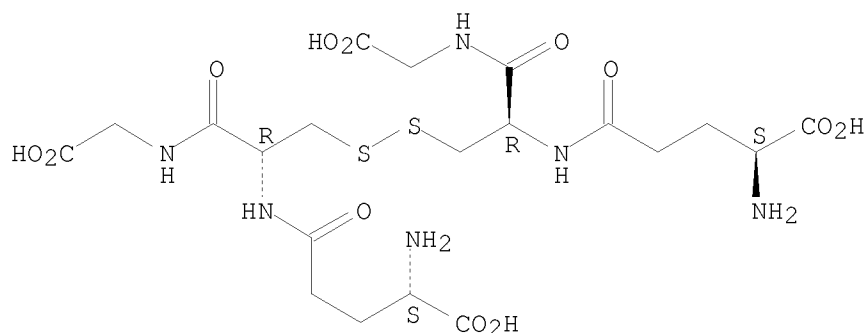
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 13 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2000:323694 CAPLUS  
Correction of: 1997:554100  
DOCUMENT NUMBER: 132:304479  
Correction of: 127:172383  
TITLE: Organisms and enzymic systems as anthropogenic-stress indicators in the soil-air compartment  
AUTHOR(S): Santagostino, Angela; Conte, Massimo; Fumagalli, Pietro; Galvani, Pietro; Zanolli, Luisa  
CORPORATE SOURCE: Universita Studi Milano, Italy  
SOURCE: Acqua Aria (1997), (6), 115-118  
CODEN: AQARDW; ISSN: 0391-5557  
PUBLISHER: Arti Poligrafiche Europee Srl  
DOCUMENT TYPE: Journal  
LANGUAGE: Italian

AB An important new component in biol. monitoring programs is a progressive use of biomarkers, generally defined as xenobiotically-induced variation in biochem. components measurable in biol. systems. The authors studied therefore if glutathione and its enzymic system evaluation in various terrestrial vertebrates and invertebrates can be a good biomarker in a battery useful for environmental evaluation. Our data seem indicate that oxidized or reduced glutathione and/or glutathione S-transferase, peroxidase and reductase can be measured in terrestrial vertebrates and invertebrates easily and that their level alterations are quant. correlated with exposure to various xenobiotics.

IT 27025-41-8, Oxidized glutathione  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(organisms and enzymic systems as anthropogenic-stress indicators in soil-air compartment)  
RN 27025-41-8 CAPLUS  
CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 14 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:229018 CAPLUS  
 DOCUMENT NUMBER: 132:221757  
 TITLE: Amino acid beverage  
 INVENTOR(S): Zhang, Qungang; You, Lin; Fan, Hongmin; Ma, Yongxia  
 PATENT ASSIGNEE(S): Chemical Research Inst., Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

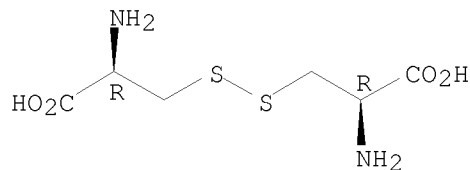
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1134258	A	19961030	CN 1996-103753	19960328
PRIORITY APPLN. INFO.:			CN 1996-103753	19960328

AB The beverage is prepared from the waste solution of hair hydrolyzate after L-cysteine extraction 12-25, sweetener 8-12, complex vitamin 0.1-0.2, Ig (trace), food essence (trace), fresh milk (or milk powder with emulsifier and stabilizer) 1-5%, microelements (trace), and addnl. water or mineral water.

IT 56-89-3, L-Cystine, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (amino acid milk health beverage)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 15 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:228988 CAPLUS  
 DOCUMENT NUMBER: 132:222866  
 TITLE: Formula and method of increasing clarity of cystine  
 INVENTOR(S): Wang, Anyun; Tang, Shangjian; Lan, Wenxiang; Tang, Jiafang; Zhang, Shiwei  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.  
 CODEN: CNXXEV



DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1197066	A	19981028	CN 1997-107455	19970421

PRIORITY APPLN. INFO.: CN 1997-107455 19970421

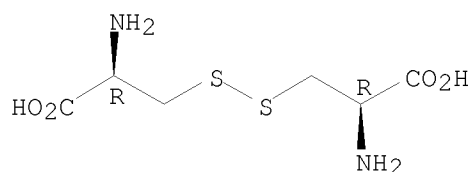
AB The formula is composed of surfactant 0.1-50, inorg. acid 50-2,000, organic acid 1-100, and activated C 100 g. The inorg. acid is selected from HCl, and H<sub>2</sub>SO<sub>4</sub>; the organic acid from citric acid, tartaric acid, and EDTA; the inorg. base from NH<sub>4</sub>OH, NaOH, and Na<sub>2</sub>CO<sub>3</sub>; and organic salt from Na citrate, K tartrate, and EDTA-Na. The clarity of cystine is increased by dissolving cystine product in inorg. acid or base, adding the other raw material, stirring, filtering, neutralizing, crystallizing, washing, and drying.

IT 56-89-3P, Cystine, preparation  
RL: IMF (Industrial manufacture); PUR (Purification or recovery); PREP (Preparation)  
(formula and method of increasing clarity of cystine)

RN 56-89-3 CAPLUS

CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 16 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:213101 CAPLUS

DOCUMENT NUMBER: 133:146387

TITLE: The Na<sup>+</sup>-dependent glutamate and aspartate transporter supports glutathione maintenance and survival of CHO-K1 cells

AUTHOR(S): Igo, Robert P., Jr.; Ash, John F.

CORPORATE SOURCE: Department of Neurobiology and Anatomy, University of Utah School of Medicine, Salt Lake City, UT, 84132, USA

SOURCE: Somatic Cell and Molecular Genetics (1998), 24(6), 341-352  
CODEN: SCMGDN; ISSN: 0740-7750

PUBLISHER: Kluwer Academic/Plenum Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

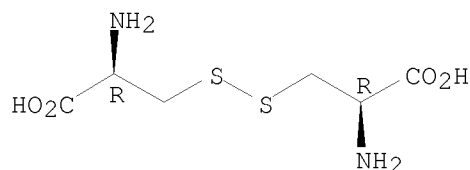
AB Glutathione synthesis, a vital cellular process, depends on L-cystine uptake by the amino acid transporter, System xC<sup>-</sup>. Here we show that a second transporter, System XAG<sup>-</sup>, is required for normal System xC<sup>-</sup> activity and glutathione maintenance by employing somatic cell mutants of CHO-K1. Uptake by System xC<sup>-</sup> in two XAG<sup>-</sup>-null mutants is significantly lower than that of CHO-K1, either under control conditions or after prolonged treatment with an electrophile. In addition, levels of glutathione in control and treated mutant cells are less than half those of wild-type CHO-K1 or of a pseudorevertant. The significance of this reduction was tested by chemical challenge: mutants are twofold more sensitive than wild type to reactive oxygen species generated by phenylbenzoquinone and to damage produced by the anticancer drug, cisplatin. These results suggest that System XAG<sup>-</sup> provides a significant portion of the glutamate used to

energize the uptake of cystine required for the synthesis of glutathione.

IT 56-89-3, L-Cystine, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (Na+-dependent glutamate and aspartate transporter supports glutathione maintenance and survival of CHO-K1 cells)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 17 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:153601 CAPLUS  
 DOCUMENT NUMBER: 132:165410  
 TITLE: Gamma-milk  
 INVENTOR(S): Zhu, Piji; Wu, Chengxue; Zhang, Yufen; Yang, Houcheng; Yang, Houji  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 5 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1179264	A	19980422	CN 1996-119478	19961014

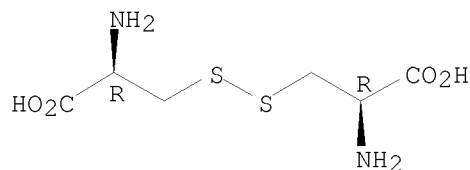
PRIORITY APPLN. INFO.: CN 1996-119478 19961014

AB The milk is composed of goat milk or milk 80-90, sugar 5-10, and  $\gamma$ -mother liquid 5-8 part. The mother liquid is composed of  $\gamma$ -linolenic acid 86,090, isoleucine 2,682, leucine 4,316, lysine 4,374, methionine 1,308, cystine 542, phenylalanine 2,474, tyrosine 23,966, tryptophane 162, valine 3,606, arginine 4,992, histidine 728, alanine 3,304, aspartate 5,760, glutamic acid 7,322, proline 4,378, serine 3,224, vitamin A 9.79, B1 8.06, B2 1.94, C 463, E 8.67, PP 1.06, B6 2.68, B3 4.58, H 25, B12 0.1, choline 360, and inositol 450 part.

IT 56-89-3, L-Cystine, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (gamma-milk)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 18 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:111469 CAPLUS  
 DOCUMENT NUMBER: 132:121810  
 TITLE: Preparation of biological compound fodder  
 INVENTOR(S): Lou, Baodong  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 3 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

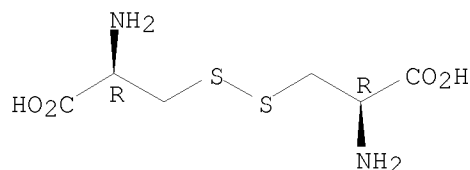
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1186615	A	19980708	CN 1996-117248	19961231
PRIORITY APPLN. INFO.:			CN 1996-117248	19961231

AB The raw material is composed of blood meal 10, rapeseed cake 14, cottonseed cake 40, additive I 6, and additive II 30 part. The additive I is composed of  $\beta$ -glucanase 0.8, acid protease 0.45,  $\beta$ -amylase 0.45, zeolite 16.7, blood meal 13.3, rapeseed cake 30, cottonseed cake 30, and wheat bran 8.3%. The additive II is composed of 106 IU/g Lactobacillus 3.3, molasses 3.3, betaine 0.4, lysine 0.4, and water to 100%. The fodder is prepared by mixing the raw material, and fermenting for 7 d in close plastic bag.

IT 56-89-3, L-Cystine, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (preparation of biol. compound fodder)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 19 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:107283 CAPLUS  
 DOCUMENT NUMBER: 132:121820  
 TITLE: Preparation of functional health drink of vinegar  
 INVENTOR(S): Yu, Qian  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

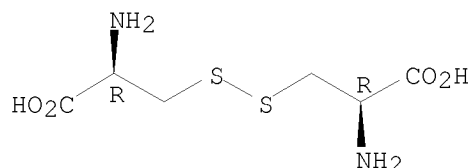
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1183471	A	19980603	CN 1996-119682	19961122
PRIORITY APPLN. INFO.:			CN 1996-119682	19961122

AB The drink is composed of nonvolatile organic acid 0.2-0.6, saponin 0.1-1, amino acid 0.2-0.6, and aged vinegar to 100%. The organic acid is selected from one or more of malic acid, citric acid, H3PO4, tartaric acid,

succinic acid, and fumaric acid, etc.; and the saponin from one or more of Radix Notoginseng, astragalus root, ginseng, lucid ganoderma, ginkgo, alkanet, towel gourd, pumpkin, and Na humate, etc. The drink is prepared by mixing the raw material, sterilizing, and deaerating, etc.

IT 56-89-3, L-Cystine, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (preparation of functional health drink of vinegar)  
 RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



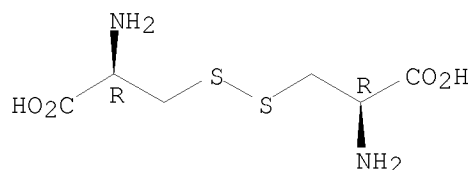
L15 ANSWER 20 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:48315 CAPLUS  
 DOCUMENT NUMBER: 132:165368  
 TITLE: Determination of the degree of incorporation of added amino acids into protein structure of enriched dough  
 AUTHOR(S): Karadzhov, Grozdan; Zinnoviadi, Sotira; Isserlijska, Dida  
 CORPORATE SOURCE: Higher Inst. Food Flavour Industry, Plovdiv, 4002, Bulg.  
 SOURCE: Nauchni Trudove - Vissh Institut po Khranitelna i Vkusova Promishlenost, Plovdiv (1998), 43, 237-242  
 CODEN: NTKVAH; ISSN: 0477-0250  
 PUBLISHER: Vissh Institut po Khranitelna i Vkusova Promishlenost  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Bulgarian

AB Essential amino acids (AA; L-Val, L-Thr, L-Cys, L-Lys, L-Met, L-Ileu) were added to wheat flour dough for bread making and their incorporation into total protein and gluten was analyzed. The effects on wet gluten yield were determined. The added AA were irregularly distributed in the liquid/solid dough phases, with the prevailing amount (61.5-96.8%) located in the solid phase and incorporated in the protein structure. No correlation between the AA amts. added and present in the liquid phase was found.

IT 56-89-3, L-Cystine, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (amino acids addition to wheat flour dough and their distribution in proteins and in liquid and solid dough phase)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.

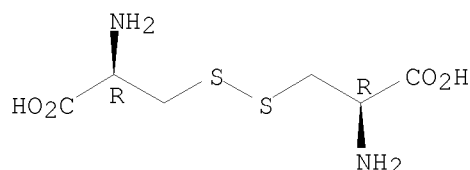


L15 ANSWER 21 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:48314 CAPLUS

DOCUMENT NUMBER: 132:165367  
 TITLE: Effect of added amino acids on gluten structure in enriched dough  
 AUTHOR(S): Karadzhov, Grozdan; Matsukas, Nikitas; Isserlijska, Dida  
 CORPORATE SOURCE: Higher Inst. Food Flavour Industry, Plovdiv, 4002, Bulg.  
 SOURCE: Nauchni Trudove - Vissh Institut po Khranitelna i Vkusova Promishlenost, Plovdiv (1998), 43, 229-235  
 CODEN: NTKVAH; ISSN: 0477-0250  
 PUBLISHER: Vissh Institut po Khranitelna i Vkusova Promishlenost  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Bulgarian

AB The influence of amino acids (AA) added individually (L-Val, L-Thr, L-Cys, L-Lys, L-Met, L-Ileu) or in a mixture on the quantity and quality of wet gluten in dough was investigated. The added amino acids only slightly decreased the wet gluten yield. The quality of the wet gluten washed out of the enriched wheat flour was superior (up to 30.8%) vs. control samples. The improvement resulted in raising the flour grade from poor to half-high when valine, cystine, and methionine were added. The AA mixture influenced neg. the quality of the wet gluten, especially gluten extensibility grade by 28.3%.  
 IT 56-89-3, L-Cystine, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (amino acids addition to enriched wheat flour dough effects on wet gluten structure)  
 RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 22 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:48300 CAPLUS  
 DOCUMENT NUMBER: 132:165363  
 TITLE: Some aspects of the nutritional value of paste emulsion products based on cereals and legumes  
 AUTHOR(S): Ben Shaaban, Galia; Stamov, Stamen N.; Nestorova, Velichka P.  
 CORPORATE SOURCE: Al-Fateh University, Tripoli, Libya  
 SOURCE: Nauchni Trudove - Vissh Institut po Khranitelna i Vkusova Promishlenost, Plovdiv (1998), 43, 115-122  
 CODEN: NTKVAH; ISSN: 0477-0250  
 PUBLISHER: Vissh Institut po Khranitelna i Vkusova Promishlenost  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Bulgarian

AB The nutritional value of emulsion products made from wheat, broad beans (*Vicia faba*), beans (*Phaseolus vulgaris*), lentils (*Lens esculenta*), chickpeas (*Cicer arietinum*), and dried peas (*Pisum sativum*) was studied. Variants of food dispersion systems with 30-50% oil phase and combinations of legume flours (10-35%) made according to an established procedure were analyzed. The protein content, amino acid composition, energy value, chemical score, index of protein nutrient quality, and other parameters were determined. The nutritional value of 2 variants of the paste products were analyzed. Considering the significant influence of the protein content and the volume

of oil phase on the structural and mech. properties of the dispersed emulsion systems, the directions for improving the nutrient balance of this type of food products are proposed.

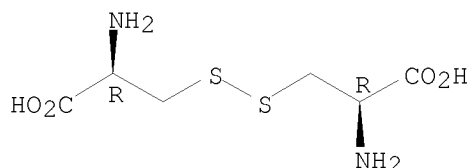
IT 56-89-3, L-Cystine, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(protein and amino acid nutritional quality of paste emulsion products made from wheat and legume flours)

RN 56-89-3 CAPLUS

CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 23 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:48248 CAPLUS

DOCUMENT NUMBER: 132:150811

TITLE: Technological and functional properties of milk protein preparations for food uses

AUTHOR(S): Spasova, M. I.

CORPORATE SOURCE: R&D Center, ELBY Bulgaricum, Vidin, Bulg.

SOURCE: Nauchni Trudove - Vissh Institut po Khranitelna i  
Vkusova Promishlenost, Plovdiv (1998), 43, 159-165  
CODEN: NTKVAH; ISSN: 0477-0250

PUBLISHER: Vissh Institut po Khranitelna i Vkusova Promishlenost

DOCUMENT TYPE: Journal

LANGUAGE: Bulgarian

AB The physicochem. properties of proteins depend on their isolation, purification, production, storage, and uses. Determination of technol. and functional

properties of milk protein preps. allows to optimize their use in food industry. Milk protein preps. maximum free of carbohydrates, fat, and mineral substances were produced by caseinate co-precipitate and ultrafiltration.

The studied properties of the preps. included solubility, swelling ability, water and oil binding, rheol., viscosity, lipophilic and hydrophilic parameters, heat stability, foaming and emulsifying capacity, and nutritive value (amino acid composition).

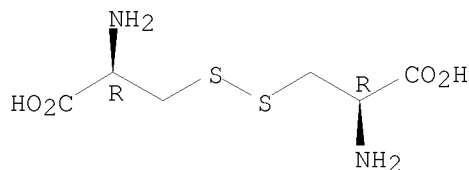
IT 56-89-3, L-Cystine, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(milk protein preps. for food industry and their technol. and functional properties)

RN 56-89-3 CAPLUS

CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 24 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:12980 CAPLUS  
 DOCUMENT NUMBER: 132:35039  
 TITLE: Egg albumin hydrolyzate and its preparation  
 INVENTOR(S): Wei, Jianming  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

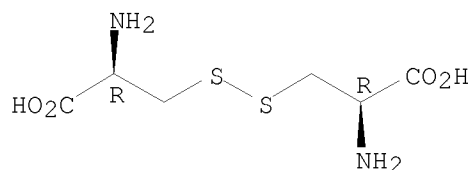
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1175360	A	19980311	CN 1996-119603	19960901
PRIORITY APPLN. INFO.:			CN 1996-119603	19960901

AB The egg albumin hydrolyzate contains lysine 2.76-6.02, histidine 0.88-1.8, arginine 2.72-6.02, threonine 1.42-3.93, serine 0.58-5.4, glutamic acid 2.02-13.72, proline 1.59-2.02, glycine 0.14-3.17, alanine 1.63-6.27, cystine 0.25, valine 2.48-5.84, isoleucine 1.81- 5.42, leucine 0.50-7.56, tyrosine 0.21-0.58, phenylalanine 4.45, methionine 2.42-3.49, aspartic acid 6.66-8.54 mg per 100 mg albumin hydrolyzate, and the total amino acid 30.97-80.71 mg per 100 mg. The process comprises denaturing the albumin by heating, zymolysis at 55° for 7-8 h by trypsin, centrifugating to get supernatant, boiling and cooling the supernatant, concentrating and spray drying to get the zymolysis matter.

IT 56-89-3, L-Cystine, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (egg albumin hydrolyzate and preparation)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.

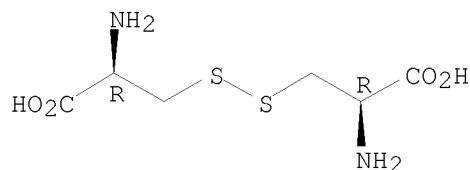


L15 ANSWER 25 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:9004 CAPLUS  
 DOCUMENT NUMBER: 132:36024  
 TITLE: Method for preparing L-cystine using ox and donkey hair as raw material  
 INVENTOR(S): Sun, Fuxing  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 5 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1167110	A	19971210	CN 1997-109069	19970411
PRIORITY APPLN. INFO.:			CN 1997-109069	19970411

AB The method comprises acid hydrolyzing the animal hair, twice neutralizing and decolorizing, and refining to get final product.  
 IT 56-89-3P, L-Cystine, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of L-cystine from ox and donkey hair)  
 RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 26 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:9003 CAPLUS  
 DOCUMENT NUMBER: 132:36023  
 TITLE: Method for extracting cystine and composite amino acids from yak hair  
 INVENTOR(S): Liu, Wanshun; Chen, Xiguang; Liu, Chengsheng  
 PATENT ASSIGNEE(S): Qingdao Marine University, Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 5 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1167109	A	19971210	CN 1997-105829	19970430

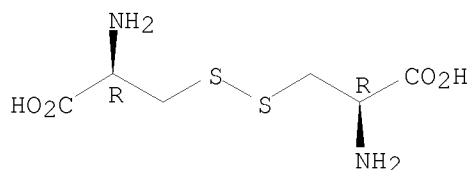
PRIORITY APPLN. INFO.: CN 1997-105829 19970430

AB The method comprises screening yak hair to remove impurity, adding 1-2 times 9-10 N HCl to hydrolyze at 95-135° for 3-15 h, pressing the hair to get the hydrolyzed liquid, cooling to 10-45°, adjusting pH to 3-6 by adding alkali, separating the cystine precipitate to give crude cystine and composite amino acids mother liquid, dissolving the crude cystine in 2-10 times 0.5-4 N HCl, adding 0.01-0.05 times decolorant to decolorize at 50-100°, adjusting pH to 3-6, separating the second precipitate to give crude cystine, repeating the decoloring circle to get the third precipitate, adding dehydration agents such as acetone, di-Et ether, calcium oxide, phosphoric anhydride, anhydrocalcium oxide to get final product; desalting the mother liquid to get the composite amino acid nutritional solution, spray drying the nutritional solution to obtain final composite amino acid dry product.

IT 56-89-3P, Cystine, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of cystine and composite amino acids from yak hair)  
 RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.





L15 ANSWER 27 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:731877 CAPLUS  
 DOCUMENT NUMBER: 131:307900  
 TITLE: Agent of combating drought and raising yields for crops  
 INVENTOR(S): Hong, Fashui; Dong, Zhenji; Zhou, Mouwen; Ma, Chengcang; Wang, Shuming  
 PATENT ASSIGNEE(S): Huaibei Coal Normal College, Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp. CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1116044	A	19960207	CN 1995-102367	19950322

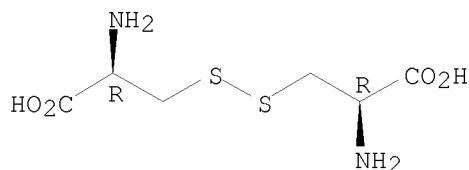
PRIORITY APPLN. INFO.: CN 1995-102367 19950322

AB The agent is composed of Ca compound, K compound, N compound, macromol. alc., phytohormones, and ATP. It is useful for enhancing drop yield of wheat and corn under drought condition. The Ca compound is selected from CaCl<sub>2</sub>, Ca(NO<sub>3</sub>)<sub>2</sub>, and CaSO<sub>4</sub>, the K compound from KCl, K<sub>2</sub>SO<sub>4</sub>, KNO<sub>3</sub>, and KSCN, the N compound from thiourea, cystine, KNO<sub>3</sub>, and urea, the macromol. alc. from polyglycol, and polyvinyl alc., and the phytohormones from indolebutyric acid, succinic acid, gibberellin, naphthylacetic acid, abscisic acid, and 2,4-D. The optimum composition is composed of CaCl<sub>2</sub> 0.2-1.0, KNO<sub>3</sub> 0.15-0.8, urea 0.5-1.5, polyglycol 0.8-1.5%, 2,4-D 0.0002- 0.0003 mg/L, ATP 1.5-3 mg/L, and water to 100%.

IT 56-89-3, L-Cystine, biological studies  
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
 (agent of combating drought and raising yields for crops)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 28 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:680682 CAPLUS  
 DOCUMENT NUMBER: 132:63543  
 TITLE: Nitrogen metabolism and amino acids of blood in the Kirghizean fine-wool sheep after addition of microelement salts, pyridoxine, and methionine to their diet  
 AUTHOR(S): Aituganov, M. D.; Rubtsova, L. F.; Grekova, N. D.;

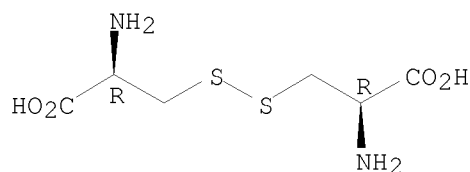
Logunova, N. G.; Shambetova, G. S.; Sultanalieva, A. B.  
 CORPORATE SOURCE: IBiF, NAN KR, Kyrgyzstan  
 SOURCE: Izvestiya Natsional'noi Akademii Nauk Kyrgyzskoi Respubliki (1998), (2-3), 65-69  
 CODEN: INKRFF  
 PUBLISHER: Ilim  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

AB Sheep were maintained on the base diet or the base diet supplemented with pyridoxine and/or methionine. After 74 days a mixture of KI, CoCl, and CuSO4 was added to the diet. The total length of the experiment was 148 days. N retention was increased by the adding microelement salts and especially methionine. Pyridoxine alone had no effect on N retention, but it did potentiate the effect of methionine. Blood amino acid levels were increased by addition of microelement salts of methionine to the diet; methionine attenuated the effect of microelement salts. The dietary supplements also affected amino acid content of plasma and formed elements of the blood. Thus, addition of vitamins and minerals to the diet of these sheep improves N utilization and the availability of amino acids.

IT 56-89-3, Cystine, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (nitrogen metabolism and amino acids of blood in the Kirghizean fine-wool sheep after addition of microelement salts and pyridoxine and methionine to their diet)

RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 29 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:676387 CAPLUS  
 DOCUMENT NUMBER: 131:256907  
 TITLE: Foliage fertilizer containing amino-acids and trace elements  
 INVENTOR(S): Huang, Zhaohua; Feng, Kaishui  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

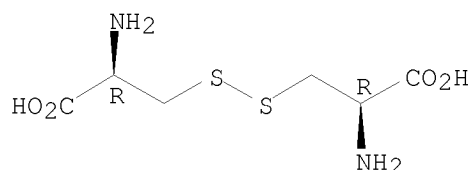
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1137029	A	19961204	CN 1996-100300	19960508
PRIORITY APPLN. INFO.:			CN 1996-100300	19960508

AB The fertilizer contains  $\alpha$ -amino acids 2.5-7%, trace element of Cu, Zn, Fe, Mo, B, K, Ca, and Mg etc. 30-150 ppm, rare earth 10-50 ppm, chelating agent 30-70 ppm, penetrating aid 10-50 ppm, and addnl. water to 100%. The chelating agent is water-soluble poly organic acids or polyol; the penetrating aid water-soluble purine compound The manufacture process comprises

aging the mother liquor of L-cystine production from human hair, pork hair, etc., adjusting pH of the mother liquor, chelating stabilization by adding trace elements, rare earth, penetrating aid and chelating agent to the mother liquor, cooling, aging, and adjusting pH, filtering, and canning.

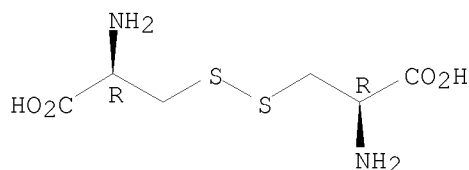
IT 56-89-3P, L-Cystine, biological studies  
RL: AGR (Agricultural use); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(foliage fertilizer containing amino-acids and trace elements)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 30 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1999:620144 CAPLUS  
DOCUMENT NUMBER: 132:47804  
TITLE: Preliminary chemical analyses of the repellent secretion of the African variegated grasshopper *Zonocerus variegatus*  
AUTHOR(S): Idowu, A. B.; Modder, W. W. D.  
CORPORATE SOURCE: Department of Biological Sciences, University of Agriculture, Abeokuta, Nigeria  
SOURCE: Insect Science and Its Application (1998), 18(2), 129-137  
CODEN: ISIADL; ISSN: 0191-9040  
PUBLISHER: ICIPE Science Press  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The chemical nature of the repellent secretion of the African grasshopper, *Z. variegatus* reared on *Acalypha wilkesiana* and *Manihot esculenta* was analyzed. It was found to contain alkaloids, glucose, proteins, free amino acids, trypsin-like proteinase, carbohydrases, lipase, and the ions  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$  and  $\text{K}^{+}$  but not  $\text{Na}^{+}$  and  $(\text{PO}_4)^{2-}$ . Alkaloids were present in the secretion whether or not the insect was fed on plants containing alkaloids. Cyanide ions were absent in the secretion, even when *Z. variegatus* was fed exclusively on the cyanogenic *M. esculenta*. The amino acid and glucose contents were the same in grasshoppers reared on different plants. The protein content in the repellent secretion was constant, despite the fluctuations observed in the protein content of the hemolymph.  
IT 56-89-3, L-Cystine, biological studies  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
(chemical analyses of repellent secretion of African variegated grasshopper)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 31 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:609324 CAPLUS

DOCUMENT NUMBER: 132:77777

TITLE: Chemical components of wild and cultivated horned rampion, *Phyteuma japonicum* Miq.

AUTHOR(S): Chung, Mi-Ja; Shin, Jung-Hye; Lee, Soo-Jung; Hong, Sung-Kook; Kang, Ho-Jung; Sung, Nak-Ju

CORPORATE SOURCE: Dept. of Food and Nutrition, and The Institute of Agriculture and Fishery Development, Gyeongsang National University, Jinju, 660-701, S. Korea

SOURCE: Han'guk Sikp'um Yongyang Hakhoechi (1998), 11(4), 437-443

CODEN: HGSHEX; ISSN: 1225-4339

PUBLISHER: Korean Society of Food and Nutrition

DOCUMENT TYPE: Journal

LANGUAGE: Korean

AB This research is to establish the basic data of the nutritive value and improve our diet. In the part of the leaf and stem of the wild and cultivated horned rampion (*Phyteuma japonicum* Mig.), the components such as chemical composition, vitamin C, free sugar, mineral, nucleotide and its related compds., composition and free amino acid were analyzed one after another. Content of the crude lipids and proteins was determined much higher in its wildness than in its cultivated horned rampion; while, that of carbohydrates was higher in the former than in the latter. The content of vitamin C was retained higher in the leaf than in the stem horned rampion. And the content of calcium among the detected minerals was outstanding in all of the samples collected, and potassium and magnesium was the next ones in its order. The main components of free sugars in both the wild and cultivated horned rampion were glucose and fructose, and their contents were higher in the stem than in the leaf. Nucleotide and its related compds. were identified with 5 kinds of nucleotides such as CMP, UMP, IMP, AMP and hypoxanthine (Hx), and the content of Hx and AMP was the highest in the wild and cultivated samples, resp. In the composition amino acid of the wild horned rampion, glutamic acid, aspartic acid and phenylalanine were outstandingly abundant; while, such amino acids such as methionine and proline were present in small amount and cysteine could not be detected in the stem. Total amts. of composition amino acid in the leaf was 2118.0 and 1120.1 mg% in the wild and cultivated sample, resp. The total free amino acid content of horned rampion ranged from 8.5 to 50.1 mg%, which were lower than that of composition amino acid. But the number of

different

kinds of free amino acids were 29, which was more than that of 17

different kinds of composition amino acids detected.

IT 56-89-3, L-Cystine, biological studies

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

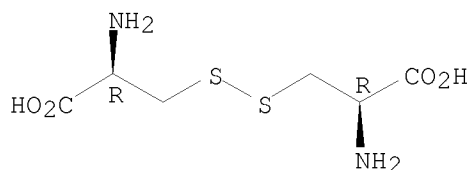
BIOL (Biological study); OCCU (Occurrence)

(of horned rampion)

RN 56-89-3 CAPLUS

CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 32 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:533041 CAPLUS

DOCUMENT NUMBER: 131:350461

TITLE: The amino acids precursory to proteins are primary human food: proline, glutamine, and arginine found free in the juices of common vegetables and herbs

AUTHOR(S): Kapuler, Alan M.; Gurusiddiah, Sarangamat

CORPORATE SOURCE: Seeds of Change, Corvallis, OR, 97333, USA

SOURCE: Journal of Medicinal Food (1998), 1(2), 97-115

CODEN: JMFOFJ; ISSN: 1096-620X

PUBLISHER: Mary Ann Liebert, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Analyses are presented for the free amino acids in the juices of the pods of a dozen bush beans, six varieties of cucumbers, the petals of two sunflowers, the leaves of three radicchios, shingiku and fenugreek, two chicories, an endive, licorice root, and garbanzo bean miso. Anal. of total and free amino acids in com. organic garbanzo bean miso shows that about 60% of the total protein is fermented into free amino acids. Analyses of free amino acids in the fresh juices of a dozen onions are also presented. Glutamine, arginine, threonine, and asparagine were found to be most abundant. The innermost bulb leaves are 9 times higher in arginine than the outermost. A green and a white broccoli were analyzed an inch at a time for free amino acids. The stems and tops were found to be very similar in content and distribution. The most abundant free amino acids found were glutamine, glutamic acid, serine, and alanine. Ratios of glutamine to glutamic acid differed. Unusually large amts. of proline were found in licorice root and in several other legumes. A summary of the highest proline concns. in fresh juices is provided for 33 sources. Summaries for free glutamine and arginine in a variety of vegetables are also provided. The roles of proline in cellular biochem., collagen biosynthesis, and body flexibility are discussed in the context that all the amino acids used in protein synthesis will be found to act at several principal levels of body and organ physiol. beyond that currently recognized and understood. The essential nutritional roles of arginine and glutamine in a variety of physiol. processes at the cell, organ, and whole body levels are also discussed.

IT 56-89-3, L-Cystine, biological studies

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

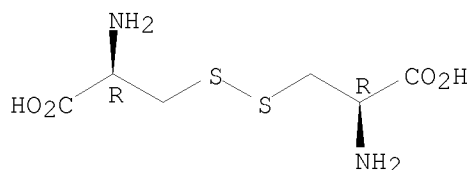
BIOL (Biological study); OCCU (Occurrence)

(free amino acids in common vegetables and herbs)

RN 56-89-3 CAPLUS

CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



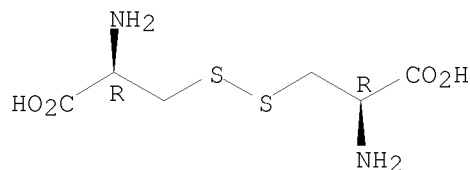
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 33 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1999:497595 CAPLUS  
DOCUMENT NUMBER: 131:157139  
TITLE: The influence of milk heat treatment on characteristics of cheese made from ultrafiltered milk. 2. Proteolysis changes during cheese ripening  
AUTHOR(S): Puda, Predrag D.; Guinee, Timmothy P.  
CORPORATE SOURCE: Fac. Agriculture, Univ. Belgrade, Zemun, 11080, Yugoslavia  
SOURCE: Prehrambena Industrija (1998), 9(3-4), 79-85  
CODEN: PRIJBE; ISSN: 0353-6564  
PUBLISHER: Savez Hemicara i Tehnologa Jugoslavije  
DOCUMENT TYPE: Journal  
LANGUAGE: Serbian

AB Cheese production from milk heated to 72-100°C and concentrated by ultrafiltration was studied. The cheeses were made from milk subjected to heat treatment at 72°C for 15 s (A), 77°C for 120 s (B), 85°C for 120 s (C), or 100°C for 120 s (D). The cheese manufacture procedure included milk composition standardization and heat treatment, preacidification, ultrafiltration, coagulation, curd cutting, syneresis, pressing, and salting. The final cheese composition corresponded to hard and semi-hard cheeses. Cheese maturation lasted 24 wk. Proteolysis was monitored via chemical methods (soluble N, N compds. soluble in 5% phosphotungstic acid), HPLC, polyacrylamide gel electrophoresis (PAGE), and free amino acid determination. Proteolysis of cheese A made from milk subjected to heat treatment standard in cheese production had typical patterns for cheese ripening. At the beginning of ripening the primary proteolysis was dominant, while the secondary proteolysis became more intense at the later stages of ripening. This was supported by high contents of free amino acids and low-mol.-weight peptides determined by HPLC in samples after 24 wk of ripening. PAGE also indicated high levels of proteolysis. Cheeses made from highly heated milk had less specific proteolysis process and both primary and secondary proteolysis products were generated almost uniformly over the entire ripening period. These cheeses appeared more mature at the beginning and less mature at the end of the ripening period compared to cheeses produced with the standard milk heat treatment.

IT 56-89-3, L-Cystine, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(milk heat treatment effects on proteolysis during cheese ripening and characteristics of cheese made from ultrafiltered milk)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

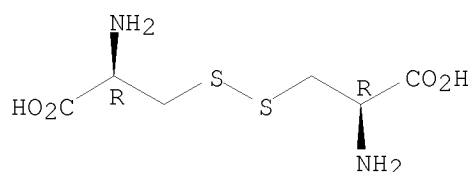
Absolute stereochemistry.



L15 ANSWER 34 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1999:459749 CAPLUS  
DOCUMENT NUMBER: 131:252083

TITLE: Complexation of corinfar and foridon with bioligands  
 AUTHOR(S): Chekman, I. S.; Yagupol'skii, L. M.; Bobkov, V. M.; Zagorodnyi, M. I.  
 CORPORATE SOURCE: Nats. Med. Univ. im. O. O. Bogomol'tsya, Kiev, Ukraine  
 SOURCE: Dopovidi Natsional'noi Akademii Nauk Ukraini (1998), (2), 201-205  
 CODEN: DNAUFL; ISSN: 1025-6415  
 PUBLISHER: Prezidiya Natsional'noi Akademii Nauk Ukraini  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Ukrainian  
 AB A method is developed to study the complexation of remedies with various bioligands. Correlation anal. of complexation parameters of corinfar and foridon and physicochem. properties of bioligands are carried out. The chemical structure of both remedies and bioligands essentially influences the stability const. of complexes. The complexation of corinfar and foridon with bioligands det. the manifestation of the primary pharmacol. reaction.  
 IT 56-89-3, Cystine, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)  
 (structure-function relations in relation to complexation of corinfar and foridon with bioligands)  
 RN 56-89-3 CAPLUS  
 CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 35 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:458943 CAPLUS  
 DOCUMENT NUMBER: 131:78417  
 TITLE: Process for obtaining a natural nonsteroidal anabolic agent  
 INVENTOR(S): Serra, Helio Martins  
 PATENT ASSIGNEE(S): Brazil  
 SOURCE: Braz. Pedido PI, 17 pp.  
 CODEN: BPXXDX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Portuguese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

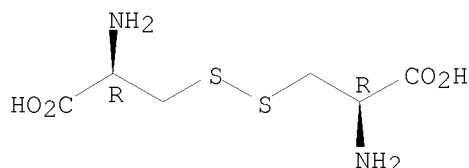
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BR 9701311	A	19981110	BR 1997-1311	19970317
PRIORITY APPLN. INFO.:			BR 1997-1311	19970317

AB A process is disclosed for obtaining a nonsteroidal anabolic agent, which process involves taking a collagenous tissue (cow hide) immediately after slaughter and submitting it to enzymic hydrolysis of protein. The cowhide obtained immediately after slaughter is cooked in a special reactor under pressure at 100-110°, at pH = 10-12 for 2 h. The material obtained is filtered and kept at 50-60°, then the filtrate is hydrolyzed with proteolytic enzymes (0.5-1%) for 6-10 h, at controlled temp and pH between 8-9, until hydrolysis is complete, obtaining a liquid hydrolyzate having a concentration of 10-15%. Further processing and sterilization with

γ-radiation produces a product having an amino acid and mineral content specified in the invention.

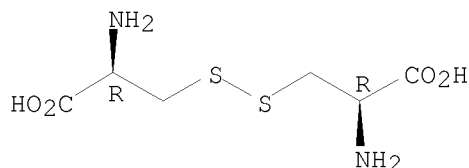
IT 56-89-3P, Cystine, biological studies  
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)  
(process for obtaining a natural nonsteroidal anabolic agent)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 36 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1999:430342 CAPLUS  
DOCUMENT NUMBER: 131:226204  
TITLE: Role of amino acids in inducing resistance to Fusarium wilt in chickpea  
AUTHOR(S): Mandavia, M. K.; Andharia, J. H.; Khandar, R. R.; Parameswaran, M.  
CORPORATE SOURCE: Department of Biochemistry, Gujarat Agricultural University, Junagadh, 362 001, India  
SOURCE: Indian Journal of Agricultural Biochemistry (1998), 11(1), 1-4  
CODEN: IJBIEG; ISSN: 0970-6399  
PUBLISHER: Indian Society of Agricultural Biochemists  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Chickpea varieties resistant (JCP-27) and susceptible (JG-62) to Fusarium wilt were grown in sick plot and root and leaf tissues, collected at pre-infectious and post-infectious stages, were analyzed for amino acids. In leaf tissue, phenylalanine, aspartic acid and glycine and in root tissue, tyrosine, phenylalanine, aspartic acid, glutamic acid and glycine were present in higher amount in the resistant plants than susceptible plants at pre-infectious stage. Aspartic acid, glutamic acid, methionine and cystine inhibited spore germination of Fusarium oxysporum f. sp. ciceri in vitro while none of them inhibited mycelial growth.  
IT 56-89-3, Cystine, biological studies  
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
(amino acids in inducing resistance to Fusarium wilt in chickpea)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.





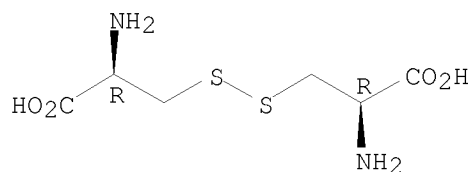
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 37 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1999:413448 CAPLUS  
DOCUMENT NUMBER: 131:212198  
TITLE: Does exercise have a clinically important effect on plasma amino acid concentrations?  
AUTHOR(S): Ihara, H.; Ohtsuka, M.; Hashizume, N.; Yamazaki, D.; Aochi, K.; Matsumoto, K.; Numata, E.  
CORPORATE SOURCE: Departments of Laboratory Medicine and Nutrition, Toho University, Tokyo, 153, Japan  
SOURCE: Clinical Chemistry and Enzymology Communications (1998), 8(1-2), 111-119  
CODEN: CCECEY; ISSN: 0892-2187  
PUBLISHER: Harwood Academic Publishers  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The determination of plasma amino acid concns. is an established tool in screening

for inborn errors of amino acid metabolism and (or) a group of diseases manifesting with abnormal amino acid concns., e.g., the increased homocysteine found in some patients with coronary artery disease. Currently, the effect of exercise on the concns. of amino acids in plasma is controversial. Using a HPLC method, we measured the plasma concns. of 24 amino acids in 13 healthy volunteers before and after they exercised on a treadmill. After about 10 min of exercise, and at a point close to 100% of their maximal oxygen uptake (VO<sub>2</sub>max), the plasma threonine, serine, asparagine, proline, glycine, citrulline, valine, tyrosine, ornithine and tryptophan were significantly decreased as compared with their concentration before exercise (p < 0.05). A significant increase was observed only in the concentration of plasma alanine. The mean inter-individual variation (mean of the differences from the group mean) that we saw before our subjects exercised was larger than the mean change in the plasma amino acid concns. caused by exercise in our 13 volunteers. When the plasma amino acid concns. after exercise were evaluated without applying a correction for the changes in plasma volume, the exercise-related changes were still smaller than the mean inter-individual, pre-exercise difference. In light of the inter-individual biol. variation being larger than exercise-induced changes, our data suggest that blood specimen for estimating plasma amino acid concns. can usually be collected without controlling for phys. activity, i.e., bed rest or similar restrictions in phys. activity is not necessary to obtain reliable ests. An exception would be a subject whose amino acid concns. are being followed closely; here, control of the collection process and pre-collection activity control are needed.

IT 56-89-3, Cystine, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(exercise have a clin. important effect on plasma amino acid concns.)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS

L15 ANSWER 38 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:374675 CAPLUS  
 DOCUMENT NUMBER: 131:168674  
 TITLE: Further prove on oxidative stress in alloxan diabetic rat tissues  
 AUTHOR(S): Matkovics, B.; Sasvari, Maria; Kotorman, Marta; Varga, Ilona Sz.; Hai, Do Quy; Varga, Cs.  
 CORPORATE SOURCE: Biological Isotope Laboratory, Jozsef Attila University of Szeged, Szeged, Hung.  
 SOURCE: Acta Physiologica Hungarica (1998), Volume Date 1997-1998, 85(3), 183-192  
 CODEN: APHHDU; ISSN: 0231-424X  
 PUBLISHER: Akademiai Kiado  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB After i.v. administration of alloxan monohydrate (AL) diabetes developed in rats. Forty-eight hours after the injection the animals were sacrificed, their blood was collected in heparin containing tubes and the tissues were dissected and frozen (-70°) until their homogenization for pro- and antioxidant testing. Our results can be summarized as follows:. (i) In the blood hemolyzate the lipid peroxidn. slightly elevated and the activity of antioxidant enzymes and reduced glutathione decreased. (ii) Similar phenomena could be observed in the different examined organ homogenates. The organs tested for pro- and antioxidant system were as follows: the liver, heart, skeletal muscle, kidney and pancreas. In our present work we attempt to confirm the data in support of the oxidative predominance over antioxidants in oxidative stress of AL diabetic rats.

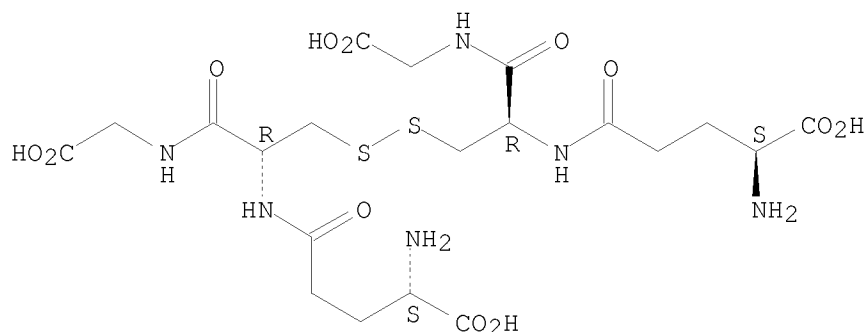
IT 27025-41-8, Oxidized glutathione  
 RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(further prove on oxidative stress in alloxan diabetic rat tissues)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
 (CA INDEX NAME)

Absolute stereochemistry.

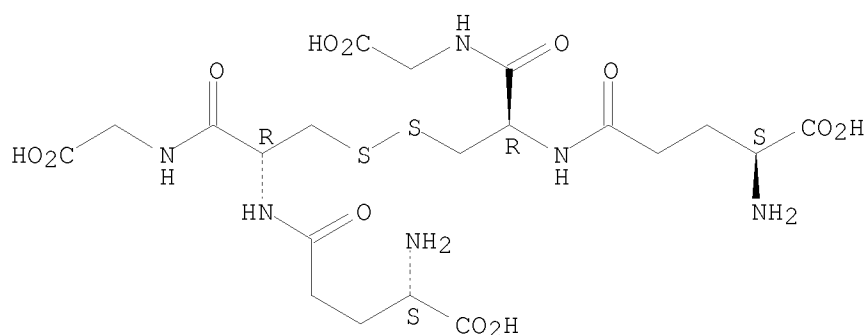


REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 39 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:371690 CAPLUS  
 DOCUMENT NUMBER: 131:179857  
 TITLE: Mechanism of humoral sleep regulation  
 AUTHOR(S): Inoue, Shojiro

CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo  
 Medical and Dental University, Japan  
 SOURCE: Saishin No to Shinkei Kagaku Shirizu (1998), 10(Suimin  
 to Sono Shogai), 35-44  
 CODEN: SNSSFW  
 PUBLISHER: Mejikarubyusha  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: Japanese  
 AB A review with 18 refs., on mechanism of humoral sleep regulation, with  
 emphasis on sleep substances, e.g. uridine and oxidized glutathione, and  
 their role in sleep regulation.  
 IT 27025-41-8, Oxidized glutathione  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); BIOL (Biological study)  
 (mechanism of sleep substances regulation of sleep)  
 RN 27025-41-8 CAPLUS  
 CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
 (CA INDEX NAME)

Absolute stereochemistry.

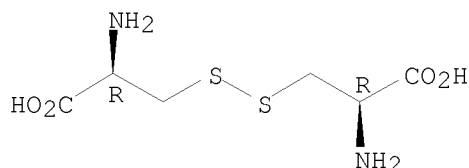


L15 ANSWER 40 OF 17378 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:366820 CAPLUS  
 DOCUMENT NUMBER: 131:169726  
 TITLE: Variability of pea protein and amino acid  
 digestibility in growing pig  
 AUTHOR(S): Grosjean, F.; Williatte-Hazouard, I.; Carrouee, B.;  
 Peyronnet, C.; Skiba, F.; Gatel, F.  
 CORPORATE SOURCE: Institut Technique des Cereales et des Fourrages,  
 Paris, 75116, Fr.  
 SOURCE: EAAP Publication (1998), 93(Recent Advances of  
 Research in Antinutritional Factors in Legume Seeds  
 and Rapeseed), 239-242  
 CODEN: EAAPAN; ISSN: 0259-322X  
 PUBLISHER: Wageningen Pers  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The protein and amino acid ileal digestibility was measured in 31 smooth  
 and tannin free pea (*Pisum sativum*) batches of different varieties grown  
 in different regions. Each pea batch was tested on 4 castrated male pigs,  
 30-90 kg live weight, fitted with an end-to-end ileorectal anastomosis. Most  
 spring pea varieties with low trypsin inhibitor activity (TIA) had high  
 standardized ileal protein and amino acids digestibility: >78% for  
 protein, >82% for lysine, >77% for threonine, >80% for methionine, >72%  
 for cystine, and >73% for tryptophan. Three batches with low TIA and low  
 fiber content had slightly lower protein and amino acids digestibility  
 which was related to particular growing conditions. Winter varieties with  
 medium or high TIA activity had lower protein and amino acid standardized

ileal digestibilities. Thus, the pea protein and amino acid digestibility decreases with increased TIA levels.

IT 56-89-3, L-Cystine, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses) (protein and amino acid digestibility from Pisum sativum pea cultivars in growing swine)  
RN 56-89-3 CAPLUS  
CN L-Cystine (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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'56-89-3' IS NOT A VALID FIELD CODE
L17          0 RN/56-89-3
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      1567 CYSTINE
L18      934 L-CYSTINE
          (L(W)CYSTINE)
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FULL ESTIMATED COST          16.83      814.64

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)  SINCE FILE      TOTAL
                                               ENTRY      SESSION
CA SUBSCRIBER PRICE          0.00      -32.00
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FILE LAST UPDATED: 20 Aug 2008 (20080820/ED)

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=> s l20 not cystine
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L21      8724 L20 NOT CYSTINE

=> s l21 not py > 1998
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L22      5189 L21 NOT PY > 1998
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=> d 122 ibib abs hitstr 1-30

L22 ANSWER 1 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:943382 CAPLUS

TITLE: Reactive-Electrospray-Assisted Laser  
Desorption/Ionization for Characterization of Peptides  
and Proteins

AUTHOR(S): Peng, Ivory X.; Ogorzalek Loo, Rachel R.; Shiea,  
Jentaie; Loo, Joseph A.

CORPORATE SOURCE: Department of Chemistry and Biochemistry and  
Department of Biological Chemistry, David Geffen  
School of Medicine, University of California-Los  
Angeles, Los Angeles, CA, 90095, USA

SOURCE: Analytical Chemistry (Washington, DC, United States)  
ACS ASAP

CODEN: ANCHAM; ISSN: 0003-2700

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Electrospray-assisted laser desorption/ionization (ELDI) is a soft ionization method for mass spectrometry (MS) and combines features of both electrospray ionization (ESI) and matrix-assisted laser desorption/ionization to generate ESI-like multiply charged mols. The ELDI process is based on merging ESI-generated, charged droplets with particles UV laser desorbed from dried or wet sample deposits. The authors previously reported that ELDI is amenable for MS-based protein identification of large peptides and small proteins using top-down and bottom-up techniques (Peng, I. X., et al., 2007). The authors have extended their studies by applying collisionally activated dissociation and electron-transfer dissociation MSn to protein anal. and show that ELDI is capable of multistage MS to MS4 for top-down characterization of large proteins such as 29 kDa carbonic anhydrase. Multiply charged proteins generated by the ELDI mechanism can be shifted to higher charge by increasing the organic content in the ESI solvent to denature the protein mols., or by adding m-nitrobenzyl alc. to the ESI solvent. Furthermore, the authors introduce "reactive-ELDI", which supports chemical reactions during the ELDI process. Preliminary data for online disulfide bond reduction using dithiothreitol on oxidized glutathione and insulin show reactive-ELDI to be effective. These data provide evidence that the laser-desorbed particles merge with the ESI-generated charge droplets to effect chemical reactions prior to online MS detection. This capability should allow other chemical and enzymic reactions to be exploited as online protein characterization tools, as well as extending them to flexible, spatially resolved tissue screening and imaging. Also, these reactive-ELDI disulfide reduction expts. enable direct top-down protein identification for proteomic study, side stepping laborious, time-consuming sample preparation steps such as in-solution reduction and alkylation.

IT 27025-41-8, Oxidized glutathione

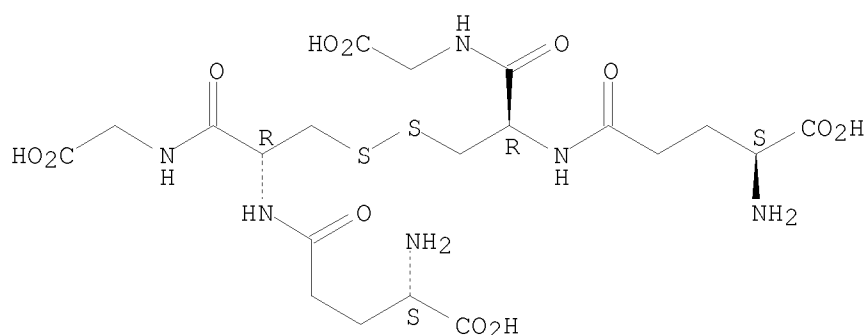
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)

(disulfide bond reduction; reactive-electrospray-assisted laser  
desorption/ionization for characterization of online disulfide bond  
reduction)

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 2 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:595378 CAPLUS

DOCUMENT NUMBER: 134:16972

TITLE: N-Acetylcysteine protects from glutathione depletion  
in rats exposed to hyperoxia

AUTHOR(S): Shattuck, Karen E.; Rassin, David K.; Grinnell, Chali D.

CORPORATE SOURCE: Department of Pediatrics, University of Texas Medical  
Branch, Galveston, TX, 77555-0526, USA

SOURCE: JPEN, Journal of Parenteral and Enteral Nutrition  
(1998), 22(4), 228-233

CODEN: JPENDU; ISSN: 0148-6071

PUBLISHER: American Society for Parenteral and Enteral Nutrition

DOCUMENT TYPE: Journal

LANGUAGE: English

AB N-acetylcysteine (NAC) may protect against oxidative injury by providing cysteine for glutathione (GSH) biosynthesis or by direct reactions with electrophiles. We have recently shown that hyperoxic exposure of rats prior to liver perfusion is associated with significant decreases in hepatic GSH and significant changes in biliary amino acid concns. We hypothesized that NAC administration during hyperoxic exposure would prevent depletion of hepatic GSH by providing cysteine for GSH biosynthesis. NAC was administered during 2 conditions known to induce GSH depletion: hyperoxic exposure and biochem. inhibition of GSH synthesis using buthionine sulfoximine (BSO). After 48 h, GSH concns. in bile, liver and perfusate and biliary amino acid concns. were determined using isolated perfused liver preps. Administration of NAC to rats maintained in normoxic or hyperoxic conditions, prior to liver perfusion, resulted in dose-dependent increases in GSH concns. in bile, liver and perfusate, increases in bile flow rates and changes in biliary amino acid concns. When BSO was given concurrently with NAC in normal or hyperoxic conditions, these effects were not observed, and oxidant stress was evident. Thus, NAC prevents oxidant stress during hyperoxic exposure, most likely by supplying cysteine as a precursor for GSH synthesis.

IT 27025-41-8, GSSG

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

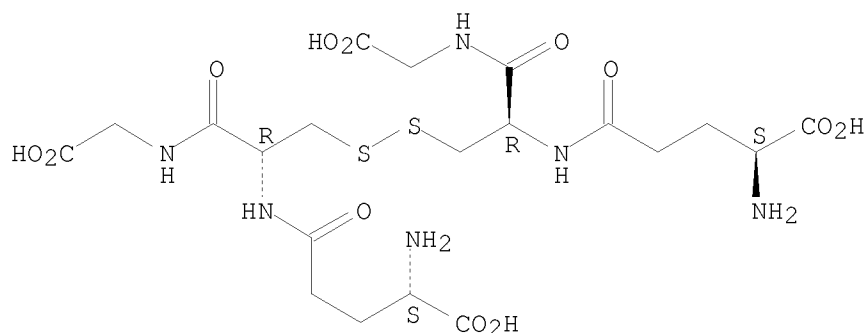
BIOL (Biological study); OCCU (Occurrence)

(N-acetylcysteine protects from glutathione depletion in rats exposed to hyperoxia)

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 3 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:516466 CAPLUS

DOCUMENT NUMBER: 133:148563

TITLE: The mechanism of the form a of aldose reductase formation in diabetes mellitus. The probable regulation of the enzyme activities in the result of the impairments of the thiol/disulfide exchange in diabetes mellitus

AUTHOR(S): Rabinovich, S. E.; Shono, N. I.; Platonova, L. V.; Dyuzheva, T. G.; Gal'perin, E. I.

CORPORATE SOURCE: Mosk. Med. Akad. im. I. M. Sechenova, Moscow, 119881, Russia

SOURCE: Voprosy Meditsinskoi Khimii (1997), 43(2), 104-111  
CODEN: VMDKAM; ISSN: 0042-8809

PUBLISHER: NII Biomeditsinskoi Khimii

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Incubation of form b ( $K_m$  3.0-4.0 mM;  $V_{max}$  4.38±0.6 mU/OD280) of aldose reductase (AR; E.C.1.1.1.21.) from human red cells in the oxygen radical generating system or treatment by excess concns. of GSSG (10 mM) caused the increase of specific activity ( $V_{max}$  10.0 mU/OD280), increase of the affinity for D-Glucose ( $K_m$  25.4 mM) and alterations of the chromatog. properties of the enzyme. The modified form b of AR has very similar properties with form a of this enzyme ( $K_m$  6.5-19.0 mM;  $V_{max}$  16.7±3.2 mU/OD280), that had been found in red cells in patients with diabetes mellitus. The treatment of the modified form b or form a by GSH (10 mM) caused the appearance of the AR form that has very similar properties with form b. On the bases of these results the main role of SH-groups of AR in the interconversion of forms b and a is concluded. It is suggested that the increase of the lipid peroxidn. may be one of the causes of the formation of AR form a, because the product of the lipid peroxidn. can oxidize the SH-groups of the protein and enzymes or cause the increase of GSSG in the cell. Alteration of the properties of the carbohydrate-metabolizing enzymes resulting from the impairment of thiol/disulfide exchange in diabetes mellitus is discussed.

IT 27025-41-8, GSSG

RL: ADV (Adverse effect, including toxicity); BPR (Biological process);  
BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(aldose reductase associated with carbohydrate metabolism and reactive oxygen

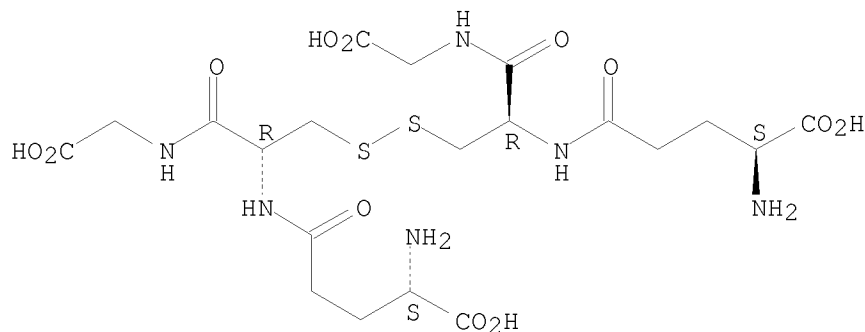
species formation in relation to diabetes mellitus in human)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)



Absolute stereochemistry.



L22 ANSWER 4 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:323694 CAPLUS  
Correction of: 1997:554100

DOCUMENT NUMBER: 132:304479  
Correction of: 127:172383

TITLE: Organisms and enzymic systems as anthropogenic-stress indicators in the soil-air compartment

AUTHOR(S): Santagostino, Angela; Conte, Massimo; Fumagalli, Pietro; Galvani, Pietro; Zanolli, Luisa

CORPORATE SOURCE: Universita Studi Milano, Italy  
SOURCE: Acqua Aria (1997), (6), 115-118

PUBLISHER: CODEN: AQARDW; ISSN: 0391-5557  
Arti Poligrafiche Europee Srl

DOCUMENT TYPE: Journal

LANGUAGE: Italian

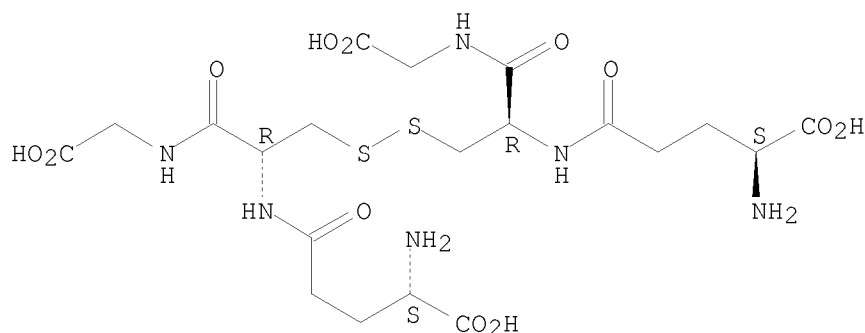
AB An important new component in biol. monitoring programs is a progressive use of biomarkers, generally defined as xenobiotically-induced variation in biochem. components measurable in biol. systems. The authors studied therefore if glutathione and its enzymic system evaluation in various terrestrial vertebrates and invertebrates can be a good biomarker in a battery useful for environmental evaluation. Our data seem indicate that oxidized or reduced glutathione and/or glutathione S-transferase, peroxidase and reductase can be measured in terrestrial vertebrates and invertebrates easily and that their level alterations are quant. correlated with exposure to various xenobiotics.

IT 27025-41-8, Oxidized glutathione  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(organisms and enzymic systems as anthropogenic-stress indicators in soil-air compartment)

RN 27025-41-8 CAPLUS

CN Glycine, L-gamma-glutamyl-L-cysteinyl-, bimol. (2-2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 5 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:374675 CAPLUS

DOCUMENT NUMBER: 131:168674

TITLE: Further prove on oxidative stress in alloxan diabetic rat tissues

AUTHOR(S): Matkovics, B.; Sasvari, Maria; Kotorman, Marta; Varga, Ilona Sz.; Hai, Do Quy; Varga, Cs.

CORPORATE SOURCE: Biological Isotope Laboratory, Jozsef Attila University of Szeged, Szeged, Hung.

SOURCE: Acta Physiologica Hungarica (1998), Volume Date 1997-1998, 85(3), 183-192

CODEN: APHHDU; ISSN: 0231-424X

PUBLISHER: Akademiai Kiado

DOCUMENT TYPE: Journal

LANGUAGE: English

AB After i.v. administration of alloxan monohydrate (AL) diabetes developed in rats. Forty-eight hours after the injection the animals were sacrificed, their blood was collected in heparin containing tubes and the tissues were dissected and frozen ( $-70^{\circ}$ ) until their homogenization for pro- and antioxidant testing. Our results can be summarized as follows: (i) In the blood hemolyzate the lipid peroxidn. slightly elevated and the activity of antioxidant enzymes and reduced glutathione decreased. (ii) Similar phenomena could be observed in the different examined organ homogenates. The organs tested for pro- and antioxidant system were as follows: the liver, heart, skeletal muscle, kidney and pancreas. In our present work we attempt to confirm the data in support of the oxidative predominance over antioxidants in oxidative stress of AL diabetic rats.

IT 27025-41-8, Oxidized glutathione

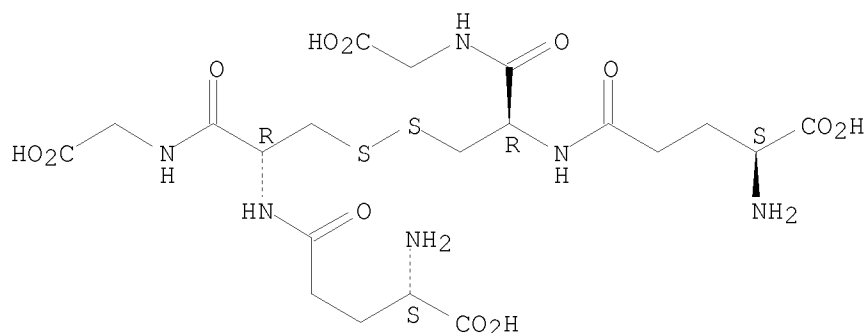
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(further prove on oxidative stress in alloxan diabetic rat tissues)

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:371690 CAPLUS

DOCUMENT NUMBER: 131:179857

TITLE: Mechanism of humoral sleep regulation

AUTHOR(S): Inoue, Shojiro

CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan

SOURCE: Saishin No to Shinkei Kagaku Shirizu (1998), 10(Suimin to Sono Shogai), 35-44

CODEN: SNSSFW

PUBLISHER: Meji Karubyusha

DOCUMENT TYPE: Journal; General Review

LANGUAGE: Japanese

AB A review with 18 refs., on mechanism of humoral sleep regulation, with emphasis on sleep substances, e.g. uridine and oxidized glutathione, and their role in sleep regulation.

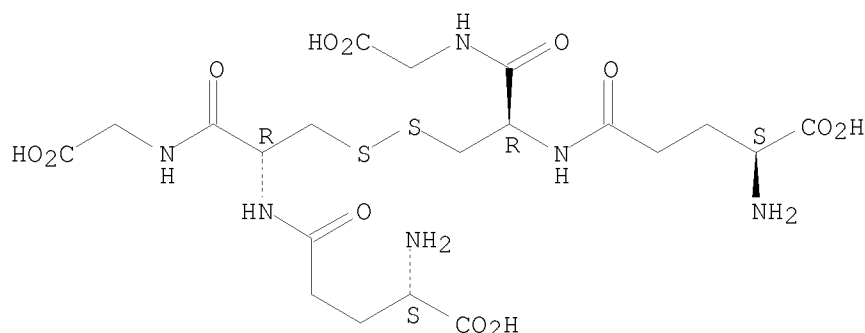
IT 27025-41-8, Oxidized glutathione

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (mechanism of sleep substances regulation of sleep)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 7 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:359355 CAPLUS

DOCUMENT NUMBER: 131:179676

TITLE: Biological evaluation of compounds for their physical dependence potential and abuse liability. XXI. Drug

evaluation committee of the college on problems of drug dependence (1997)

AUTHOR(S): Jacobson, A. E.

CORPORATE SOURCE: Laboratory of Medicinal Chemistry, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, USA

SOURCE: NIDA Research Monograph (1998), Volume Date 1997, 178(Problems of Drug Dependence, 1997), 346-362  
CODEN: MIDAD4; ISSN: 0361-8595

PUBLISHER: National Institute on Drug Abuse

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The drug evaluation committee (DEC) of the NIH evaluated the dependence potential and abuse liability of a number of new compds.

IT 203498-62-8  
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(evaluation of compds. for their phys. dependence potential and abuse liability)

RN 203498-62-8 CAPLUS

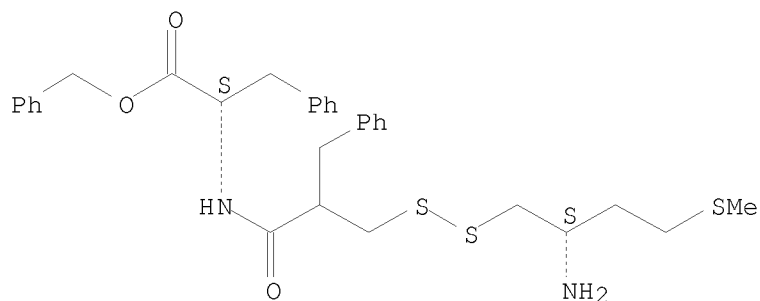
CN L-Phenylalanine, N-[2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester, methanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 135949-60-9

CMF C31 H38 N2 O3 S3

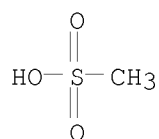
Absolute stereochemistry.



CM 2

CRN 75-75-2

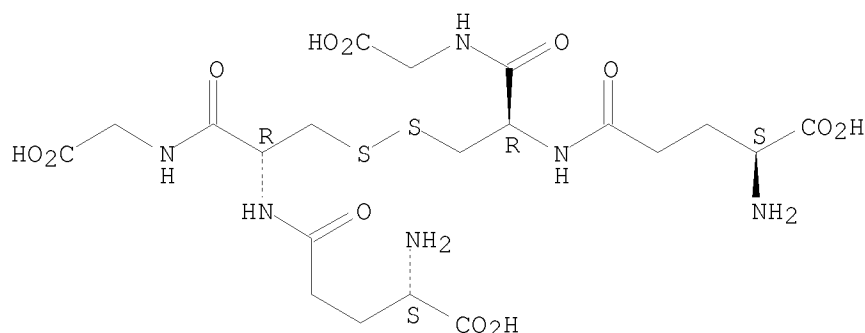
CMF C H4 O3 S



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1999:325293 CAPLUS  
 DOCUMENT NUMBER: 131:126542  
 TITLE: Detoxication of cadmium ions in *Campylobacter* spp  
 AUTHOR(S): Mendz, G. L.  
 CORPORATE SOURCE: School of Biochemistry and Molecular Genetics, The University of New South Wales, Sydney, 2052, Australia  
 SOURCE: Metal Ions in Biology and Medicine, Proceedings of the International Symposium on Metal Ions in Biology and Medicine, 5th, Neuherberg/Munich, Germany, May 8-10, 1998 (1998), 344-348. Editor(s): Collery, Phillipe. Libbey Eurotext: Montrouge, Fr.  
 CODEN: 67RFAL  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English  
 AB The in situ inhibition of *Campylobacter* spp. glutathione reductase by Cd<sup>2+</sup>, and the interactions of glutathione and glutathione reductase with Cd<sup>2+</sup> were studied to obtain a better understanding of glutathione-based detoxication mechanisms. Enzyme activity in bacterial lysates was determined from 1H-NMR time courses. The interactions of Cd<sup>2+</sup> with glutathione reductase, and with GSSG and GSH were investigated employing 1H-, 13C- and 113Cd-NMR spectroscopy. Inhibition of glutathione reductase activity by Cd<sup>2+</sup> was competitive with respect to oxidized glutathione. Progress curves of the reduction of glutathione in the presence of Cd<sup>2+</sup> ions were biphasic, and characterized by an early phase of low enzymic activity followed by a late phase with a faster rate of reaction. The duration of the early phase depended on Cd<sup>2+</sup> concentration. Measurement of the binding of Cd<sup>2+</sup> ions to the enzyme and to glutathione served to establish the origin of this biphasic behavior. The results showed that Cd<sup>2+</sup> ions bind to glutathione reductase and GSH, a product of the enzyme reaction, but not to GSSG, a substrate of the reaction. It was concluded that tight binding of Cd<sup>2+</sup> by GSH removed available Cd<sup>2+</sup> cations from the medium, thus decreasing enzyme inhibition.  
 IT 27025-41-8, GSSG  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (detoxication of cadmium ions in *Campylobacter* spp in relation to glutathione)  
 RN 27025-41-8 CAPLUS  
 CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 9 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:315189 CAPLUS  
 DOCUMENT NUMBER: 131:84130

TITLE: Thiol pools and glutathione redox ratios as possible indicators of copper toxicity in the green macroalgae *Enteromorpha* spp. from the Scheldt Estuary (SW Netherlands, Belgium) and Thermaikos Gulf (Greece, N Aegean Sea)

AUTHOR(S): Rijstenbil, J. W.; Haritonidis, S.; Malea, P.; Seferlis, M.; Wijnholds, J. A.

CORPORATE SOURCE: Centre for Estuarine and Coastal Ecology, Netherlands Institute of Ecology, Yerseke, NL-4400 AC, Neth.

SOURCE: Hydrobiologia (1998), 385, 171-181  
CODEN: HYDRB8; ISSN: 0018-8158

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

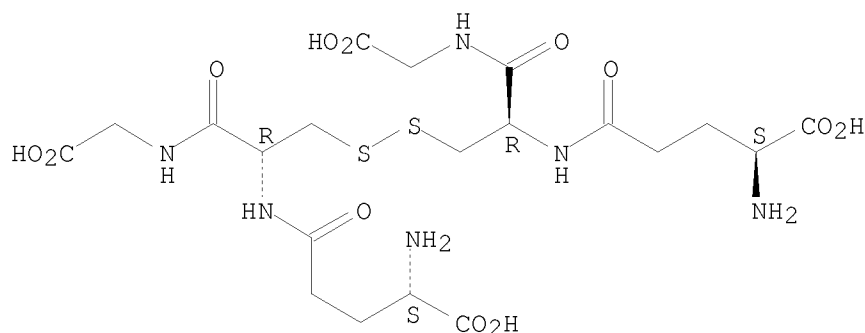
AB Defense mechanisms against Cu toxicity were examined in two dominant *Enteromorpha* species from two coastal water types. The macroalgae were collected at three locations in the eulittoral of the Scheldt Estuary (Netherlands, Belgium) and the Thermaikos Gulf (Greece). For 10 days *E. prolifera* (Scheldt) and *E. linza* (Thermaikos) were incubated in seawater media of different salinities: 6, 9, 23 psu and 25, 30, 35 psu, resp. In one series, media were enriched with 100 µg Cu L<sup>-1</sup>; responses were compared with those in controls with no extra Cu added. *Enteromorpha*, which is frequently used as a monitor species for heavy metal contamination, had relatively high Cu tissue levels (0.5-3.8 µmol Cu gdw<sup>-1</sup>). Cu levels in *E. prolifera* controls (Scheldt) decreased with salinity; this was not the case with Cu levels in *E. linza* controls (Thermaikos). During the 10-d incubation algal protein contents and tissue Cu were rather stable. In *E. linza* (Thermaikos) algal protein contents were significantly lower than those of *E. prolifera* (Scheldt), although there was no indication for nitrogen limitation in *E. linza*. *E. linza* also had much lower glutathione pools than *E. prolifera*. Only under acute Cu stress (metal addition) did *E. prolifera* synthesize metal-binding thiols (phytochelatins). Phytochelatin pools are not suitable as an indicator of the Cu levels in these algae. The glutathione redox ratio GSH:(GSH + 0.5 GSSG) was used as an indicator of (Cu-induced) oxidative stress. In *E. prolifera* (Scheldt) this ratio decreased with algal Cu content ( $P < 0.05$ ), from .apprx.0.5 to .apprx.0.2. The average glutathione ratios in *Enteromorpha* from the Scheldt and Thermaikos showed some oxidative stress induction with increasing algal Cu contents, however more clearly if Cu was added. As this redox ratio can also be influenced by environmental factors such as irradiance and dessication, it may not be useful as an indicator for Cu-induced oxidative stress in situ.

IT 27025-41-8, GSSG  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(thiol pools and glutathione redox ratios as possible indicators of copper toxicity in green macroalgae *Enteromorpha* spp. from Scheldt Estuary and Thermaikos Gulf)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 10 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:309084 CAPLUS

DOCUMENT NUMBER: 131:139293

TITLE: Regulation of metabolic pathways in liver and kidney during experimental diabetes: Effects of antidiabetic compounds

AUTHOR(S): Baquer, Najma Zaheer; Gupta, Dhananjay; Raju, Jayadev  
CORPORATE SOURCE: Hormone and Drug Research Laboratory, School of Life Sciences, Jawaharlal Nehru University, New Delhi, 110 067, India

SOURCE: Indian Journal of Clinical Biochemistry (1998), 13(2), 63-80

CODEN: IJCBEY; ISSN: 0970-1915

PUBLISHER: Association of Clinical Biochemists of India

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Diabetes has been classified as a disease of glucose overprod. by tissues, mainly liver and glucose underutilization by insulin-requiring tissues like the liver, adipose, and muscle due to the lack of insulin. There is, however, glucose over utilization in tissues not dependent on insulin for glucose transport like the kidney, nerve, and brain. There are serious complications due to this excess glucose in these tissues and their reversal is important for a good metabolic control and normalization of other parameters. Insulin, trace metals, and some plant exts. have been used to see the reversal effects of the complications of diabetes in liver and kidney in exptl. diabetes. Almost complete reversal of the metabolic changes has been achieved in the activities of key enzymes of metabolic pathways in the liver and kidney and an effective glucose control has been achieved suggesting a combination of therapies in the treatment of the metabolic disturbance of the diabetic state.

IT 27025-41-8, GSSG

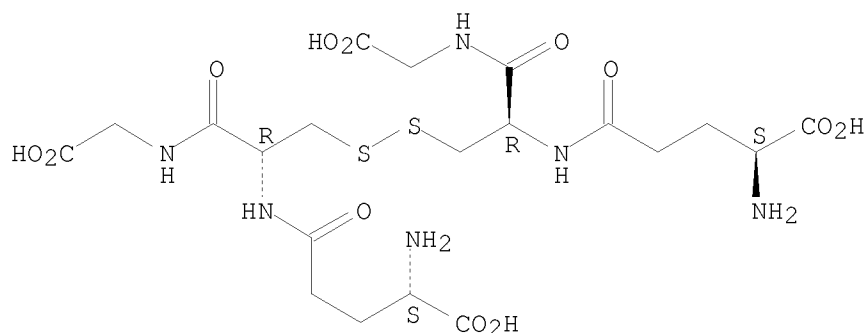
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(regulation of metabolic pathways in liver and kidney during exptl. diabetes and the effects of antidiabetic compds.)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 11 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:287691 CAPLUS

DOCUMENT NUMBER: 131:71653

TITLE: Metabolism of glutathione in isolated non filtering rat kidneys

AUTHOR(S): Sampaio, Helena Alves De Carvalho; Novais Neto, Urias; Carvalho, Krishnamurti De Moraes; Fonteles, Manasses Claudino

CORPORATE SOURCE: Unidade de Pesquisas Clinicas, Universidade Federal do Ceara, Fortaleza, 60 436-160, Brazil

SOURCE: Research Communications in Molecular Pathology and Pharmacology (1998), 102(3), 305-312  
CODEN: RCMPE6; ISSN: 1078-0297

PUBLISHER: PJD Publications Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The aim of this work was to study the metabolism of glutathione in the isolated non-filtering rat kidney. Kidneys were perfused with Krebs-Henseleit solution containing 1 mM of glutathione. The anal. of the peptide residues and their components was done in an amino acid microanalyzer. The results showed that glutathione was significantly oxidized to a maximal concentration of 0.06 mM at end of 20 min (94%).

Oxidized

glutathione was formed showing a slight elevation in the first 20 min and declining thereafter, being degraded to its constituent amino acids to a final concentration of 0.05 mM (5%). The tripeptide produced glutamic acid, glycine and cysteine in increasing concns. The hydrolysis of glutathione allowed us to believe that  $\gamma$ -glutamyl transpeptidase, among other enzymes is present in the counterluminal membranes of the rat kidney contributing to the handling of glutathione. Our results open new ways to the study of glutathione metabolism

IT 27025-41-8, Oxidized glutathione

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)

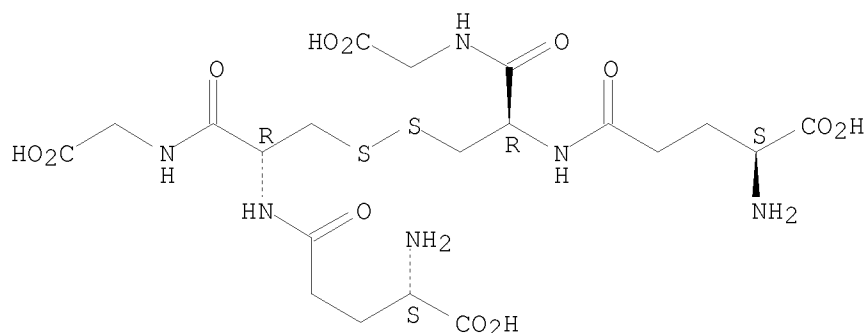
(metabolism of glutathione in isolated non filtering rat kidneys in relation to)

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.





REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 12 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:224152 CAPLUS

DOCUMENT NUMBER: 131:40696

TITLE: Biotransformation and hepatotoxicity aspects of dibromochloromethane as well as combined effects with other halomethanes and mercury-II chloride

AUTHOR(S): Damme, Britt; Wunscher, Ulrike; Pankow, Dieter

CORPORATE SOURCE: Germany

SOURCE: Toxikologische Untersuchungen zur Interaktion von Chlordibrommethan mit Anderen Haloformen und Quecksilber (1998), 92-148, 286-330. Editor(s): Pankow, Dieter; Gattermann, Rolf; Schmidt, Reiner. Martin-Luther-Universitaet Halle-Wittenberg: Halle/Saale, Germany.

CODEN: 67NKAG

DOCUMENT TYPE: Conference

LANGUAGE: German

AB Dose- and time-related metabolic and hepatotoxic effects of chlorodibromomethane (CDBM) were studied acutely, subacutely and chronically in male Wistar rats. The influences of the formation of the CDBM metabolites bromide and carbon monoxide (CO), measured as bromide concentration in the plasma and carboxyHb (COHb) level in the blood, were investigated including changes of the activity of cytochrome P 450 (CYP) species and the reduced (GSH) and oxidized glutathione (GSSG) level in the liver. The leucine aminopeptidase (LAP) activity in the plasma was used as a marker of hepatotoxicity. Interactions of CDBM with trichloromethane (TCM), bromodichloromethane (BDCM), tribromomethane (TBM), dichloromethane and mercuric chloride (HgCl<sub>2</sub>) were studied. The mean basic levels of bromide in the plasma of rats receiving vehicle were 75±36 µmol/l (n = 27). After administration of CDBM at 0.4, 0.8, 1.6 and 3.1 mmol/kg body weight (BW) p.o., the mean bromide levels rose to maximal values that were higher by factor 27, 48, 69 and 135, resp. Bromide elimination was slow and the plasma level was significantly increased following repeated administration in comparison to a single administration of CDBM. This effect was also seen after TBM. The maximal bromide concentration depends of

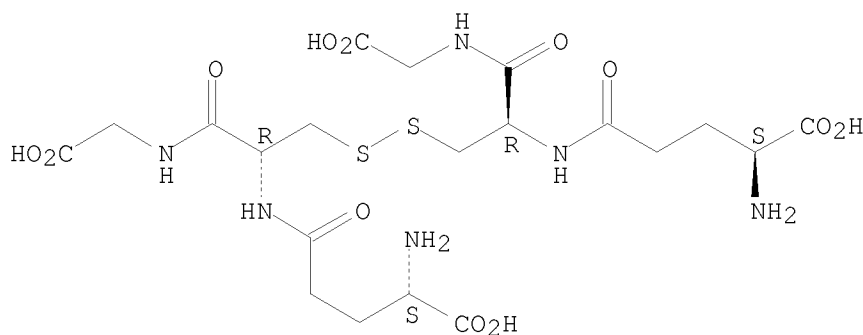
the

bromine content of the trihalomethane mol. The mean normal level of 0.45±0.32% COHb in rats (n = 30) was significantly increased following oral CDBM intake. The AUC (AREA UNDER CURVE) values COHb vs. time increased following equimolar doses of BDCM, CDBM or TBM 1.3-, 2.4-, and 9.5 times, resp. The oxidative metabolism of CDBM was influenced by the GSH level in the liver. The rate of COHb and bromide formation was decreased after GSH depletion due to pretreatment of rats with buthionine sulfoximine and increased following enhancement of the GSH level due to pretreatment of the animals with butylated hydroxyanisole. The GSSG level in the liver was increased significantly due to a single oral intake of

CDBM. The administration of diethyldithiocarbamate, a mechanism-based inhibitor of CYP2E1, leads to an inhibition of the oxidative metabolism of CDBM. The biotransformation of CDBM is stimulated by isoniazid (inducer of CYP2E1), phenobarbital (inducer of CYP2B1/2B2) or m-xylene (inducer of CYP2E1, CYP2B1/CYP2B2) as seen by the higher rate of COHb and bromide formation and by lower levels of CDBM in the blood and in the fat tissue. Similar results were demonstrated with TBM. The bromide and COHb levels were not higher due to chronical intake of CDBM with the drinking water (500 µg/l = 2,4 µmol/l) in comparison to the basis levels, measured after each two weeks for 26 wk and 1, 2, 4, 8, 16, and 32 days after completion of the chronic CDBM exposure. The partial oxygen pressure (pO<sub>2</sub>), carbon dioxide pressure (pCO<sub>2</sub>) and the pH level of the blood, the concns. of Ca<sup>2+</sup> and K<sup>+</sup> in the plasma and the GSSG level of the liver were not out of the normal range, but a trend to an increased activity of p-nitrophenol hydroxylase activity (marker of CYP2E1) in hepatic microsomes and to a decreased content of GSH in the liver was observed. An increase of LAP activity in the plasma was detected, 8 and 16 days after completion of the chronical intake of CDBM. The COHb levels due to combined administration of two trihalomethanes were < 5% COHb. Higher levels were determined due to intake of TBM (0.8 mmol/kg BW) per se or due to TBM plus CDBM only. The formation of bromide in the plasma was decreased in each case after simultaneous intake of equimolar doses of trihalomethanes, compared to the dose 0.8 mmol CDBM/kg BW. The activity of LAP in the plasma was increased due to combined uptake of CDBM plus TBM or CDBM plus TCM.

IT 27025-41-8, GSSG  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (biotransformation and hepatotoxicity aspects of dibromochloromethane and combined effects with other halomethanes and mercury-II chloride)  
 RN 27025-41-8 CAPLUS  
 CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
 (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 13 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:200825 CAPLUS  
 DOCUMENT NUMBER: 130:347578  
 TITLE: Estrogen administration, postexercise tissue oxidative stress and vitamin C status in male rats  
 AUTHOR(S): Tiidus, Peter M.; Bombardier, Eric; Hidioglou, Nick; Madere, Rene  
 CORPORATE SOURCE: Department of Kinesiology and Physical Education, Wilfrid Laurier University, Waterloo, ON, N2L 3C5, Can.  
 SOURCE: Canadian Journal of Physiology and Pharmacology (1998), 76(10 & 11), 952-960

CODEN: CJPPA3; ISSN: 0008-4212

PUBLISHER: National Research Council of Canada

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Estrogen can putatively act as an antioxidant and protect tissues from exercise-induced oxidative stress. To test the in vivo efficacy of estrogen, the effects of 2 wk of daily estrogen (40 µg/kg body weight β-estradiol 3-benzoate) injection on indexes of immediate postexercise oxidative stress and antioxidant status were determined in adult male rats, with and without 8 wk of prior dietary vitamin E deprivation. The treadmill running protocol (60 min at 21 m/min, 12% grade) induced significant oxidative stress as indicated by muscle glutathione status. Estrogen administration had little effect on postexercise tissue glutathione status, superoxide dismutase and glutathione peroxidase activity, and vitamin E levels. Estrogen administration induced significant redns. in muscle, liver, and heart vitamin C concns. following exercise, as well as in unexercised male rats. Tissue vitamin C loss was not directly mediated through liver glycogen or glutathione status. Thus, estrogen administration generally did not appear to influence postexercise tissue indexes of oxidative stress or antioxidant status and may have contributed to a decline in overall antioxidant protection by inducing losses in tissue vitamin C content.

IT 27025-41-8, GssG

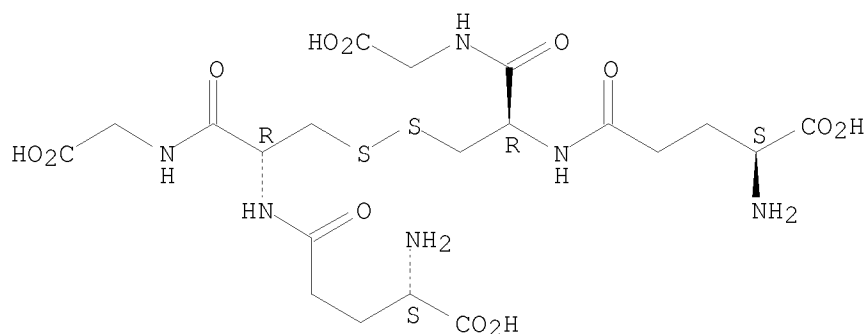
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(estrogen effect on postexercise tissue indexes of oxidative stress and vitamin C status in male)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 14 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:187491 CAPLUS

DOCUMENT NUMBER: 131:16676

TITLE: Excretion of GSSG and glutathione conjugates mediated by MRP1 and cMOAT/MRP2

AUTHOR(S): Suzuki, Hiroshi; Sugiyama, Yuichi

CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, 113-0033, Japan

SOURCE: Seminars in Liver Disease (1998), 18(4), 359-376

CODEN: SLDIEE; ISSN: 0272-8087

PUBLISHER: Thieme Medical Publishers, Inc.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 155 refs. It has been shown that both multidrug resistance-associated protein (MRP1) and canalicular multispecific organic anion

transporter (cMOAT/MRP2) have the ability to extrude glutathione conjugates (GS-X pump activity) from cells. Therefore, they play an important role in the detoxification of xenobiotics. Using mrp1/knockout mice, it has recently been shown that MRP1/mrp1 has an important role in the export of leukotriene C4(LTC4), a mediator of inflammation, and in protecting the body from a number of toxins, including several antitumor drugs. A comparison of the transport properties across the bile canalicular membrane in normal and mutant rats, whose cMOAT function is hereditarily defective, has shown that the physiol. role of cMOAT is to excrete LTC4, bilirubin glucuronides, 17 $\beta$ -estradiol-17 $\beta$ -D-glucuronide, and reduced folates. The substrate specificity and mechanism for the transport of these GS-X pumps, focusing on the pharmacol. and physiol. aspects, are summarized. The transport activity mediated by cMOAT is also discussed in terms of a comparison between membrane vesicles from hepatocytes and cMOAT-transfected cells, and the possible role of MRP1 and cMOAT in the extrusion of reduced glutathione is briefly examined

IT 27025-41-8, GSSG

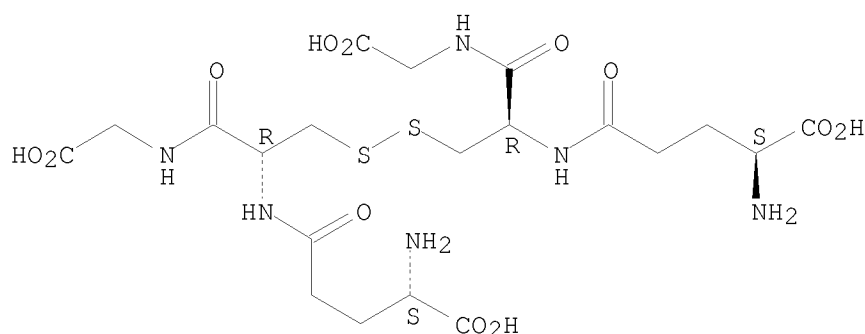
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(excretion of GSSG and glutathione conjugates mediated by MRP1 and cMOAT/MRP2)

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 155 THERE ARE 155 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L22 ANSWER 15 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:181087 CAPLUS

DOCUMENT NUMBER: 131:583

TITLE: Late onset administration of oral antioxidants prevents age-related loss of motor co-ordination and brain mitochondrial DNA damage

AUTHOR(S): Pallardo, F. V.; Asensi, M.; De La Asuncion, J. Garcia; Anton, V.; Lloret, A.; Sastre, J.; Vina, J.

CORPORATE SOURCE: Departamento de Fisiologia, Facultad de Medicina, Universitat de Valencia, Valencia, 46010, Spain

SOURCE: Free Radical Research (1998), 29(6), 617-623

CODEN: FRARER; ISSN: 1071-5762

PUBLISHER: Harwood Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

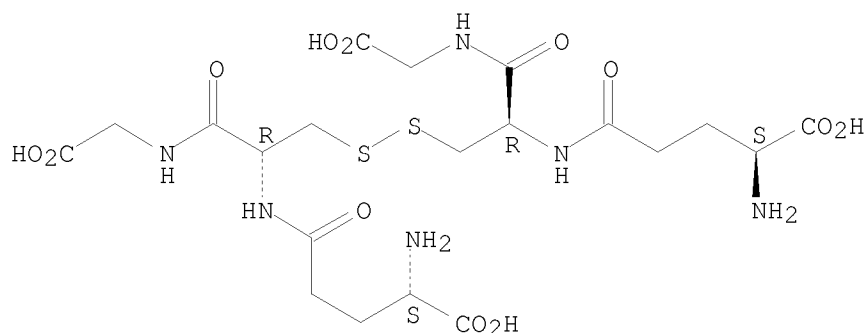
AB We have studied the effect of aging on brain glutathione redox ratio, on brain mitochondrial DNA damage and on motor co-ordination in mice and the possible protective role of late onset administration of sulfur-containing antioxidants. Glutathione redox ratios change to a more oxidized state in whole brain with aging but the changes are much more pronounced when this ratio is measured in brain mitochondria. The levels of 8-oxo-7,8-dihydro-2'-deoxyguanosine in mitochondrial DNA are much higher in the brain of old animals than in those of young ones. Late onset oral administration of sulfur-containing antioxidants partially prevents oxidation of mitochondrial glutathione and DNA. There is an inverse relationship between age-associated oxidative damage to mitochondrial DNA and motor co-ordination in old mice.

IT 27025-41-8, Glutathione disulphide  
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (oral antioxidants prevents age-related loss of motor co-ordination and brain mitochondrial DNA damage)

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide  
 (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 16 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:178518 CAPLUS  
 DOCUMENT NUMBER: 131:13829  
 TITLE: Effects of  $\mu$ -,  $\delta$ -, and  $\kappa$ -opioid agonists and enkephalinase inhibitor RB101 in two inbred rat strains  
 AUTHOR(S): Sudakov, S. K.; Lyupina, Yu. V.; Medvedeva, O. F.; Tyurina, I. V.; Maldonado, R.  
 CORPORATE SOURCE: Laboratory Neurobiology Craving, Research Center Addiction, Ministry Health, Moscow, Russia  
 SOURCE: Bulletin of Experimental Biology and Medicine (Translation of Byulleten Eksperimental'noi Biologii i Meditsiny) (1998), 125(5), 490-492  
 CODEN: BEXBAN; ISSN: 0007-4888  
 PUBLISHER: Consultants Bureau  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Analgesic and suppressive effects of selective  $\mu$ - (DAGO),  $\delta$ - (DME), and  $\kappa$ - (DAKLI) opioid agonists are compared with those of aminopeptidase N and neutral endopeptidase inhibitor RB101 in WAG/G and Fischer-344 rats. Fischer-344 rats were more susceptible to suppressive

effects of DAGO and analgesic effect of DME. It is concluded that in these rats peculiarities of the  $\mu$ - and  $\delta$ -opioid systems determine susceptibility to locomotor depression and analgesia, resp. There is no correlation between effects of DAGO and RB101 in these strains. This implies that depressive effect of RB101 is not mediated through  $\mu$ -opioid systems. In contrast, the effects of DMA on pain sensitivity in WAG/G and F-344 rats are opposite to those of RB101. This suggests that specific features in the activity of cerebral  $\delta$ -opioid system can determine the sensitivity of RB101-induced analgesia.

IT 135949-60-9, RB101 base

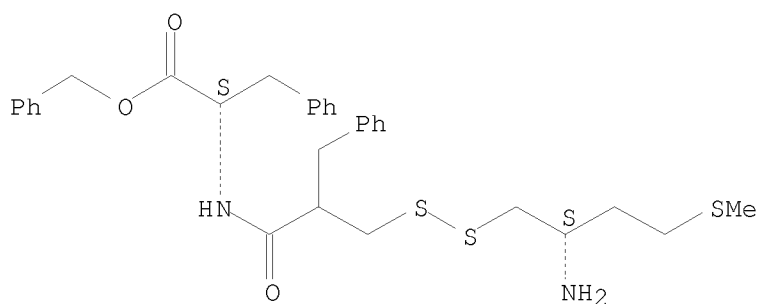
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(analgesic and suppressive effects of  $\mu$ -,  $\delta$ -, and  $\kappa$ -opioid agonists and enkephalinase inhibitor RB101 in two inbred rat strains)

RN 135949-60-9 CAPLUS

CN L-Phenylalanine, N-[2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 17 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:169449 CAPLUS

DOCUMENT NUMBER: 131:2209

TITLE: Responses of mature field-grown scots pine needles to enhanced UV-B radiation

AUTHOR(S): Laakso, K.; Kinnunen, H.; Huttunen, S.

CORPORATE SOURCE: Department of Biology/Botany, University of Oulu, Oulu, FIN-90570, Finland

SOURCE: Responses of Plant Metabolism to Air Pollution and Global Change, [International Symposium], 4th, Egmond aan Zee, Neth., Apr. 1-5, 1997 (1998), Meeting Date 1997, 361-364. Editor(s): De Kok, Luit J.; Stulen, Ineke. Backhuys Publishers: Leiden, Neth. CODEN: 67KJAW

DOCUMENT TYPE: Conference

LANGUAGE: English

AB Responses of mature field-grown Scots pine (*Pinus sylvestris*) to enhanced UV-B radiation were studied. No enhanced UV-B-induced changes in glutathione status were detected after the first year of the experiment

IT 27025-41-8, Oxidized glutathione

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

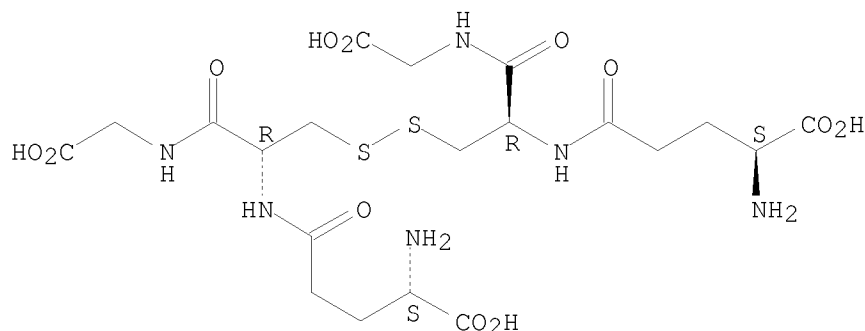
(glutathione status of mature field-grown Scots pine after enhanced UV-B radiation)

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide

(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 18 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:128096 CAPLUS

DOCUMENT NUMBER: 130:306564

TITLE: Susceptibilities of plasma antioxidants and erythrocyte constituents to low levels of ozone

AUTHOR(S): Shinriki, N.; Suzuki, T.; Takama, K.; Fukunaga, K.; Ohgiya, S.; Kubota, K.; Miura, T.

CORPORATE SOURCE: Sapporo Branch of Tsukuba Materials Information Laboratory, Sapporo, 064, Japan

SOURCE: Haematologia (1998), 29(3), 229-239

CODEN: HAEMBY; ISSN: 0017-6559

PUBLISHER: VSP BV

DOCUMENT TYPE: Journal

LANGUAGE: English

AB To evaluate the susceptibilities of human blood constituents to the low levels of ozone used in ozonized autohemotherapy (40  $\mu$ g O<sub>3</sub>/mL), we quantified plasma antioxidants and erythrocyte constituents after rapid mixing of human whole blood with ozone at 20, 40, 60, and 100  $\mu$ g/mL blood. Ascorbic acid, uric acid, and  $\alpha$ -tocopherol in plasma decreased as ozone increased, but bilirubin was unaffected. The content of thiobarbituric acid-reactive substances in plasma was increased by ozone. However, the content of thiobarbituric acid-reactive substances and  $\alpha$ -tocopherol in the erythrocyte membrane was not significantly affected. No significant changes occurred in the content of methHb, cytoskeleton proteins or erythrocyte enzymes such as Na<sup>+</sup>/K<sup>+</sup>-ATPase, acetylcholinesterase, catalase, glutathione peroxidase, glutathione reductase, and superoxide dismutase at all the ozone levels tested. A decrease in reduced glutathione in erythrocytes was the only significant change caused by the ozone level used for autohemotherapy. It may be one of the chemical events responsible for the beneficial effects of ozonized autohemotherapy.

IT 27025-41-8, Oxidized glutathione

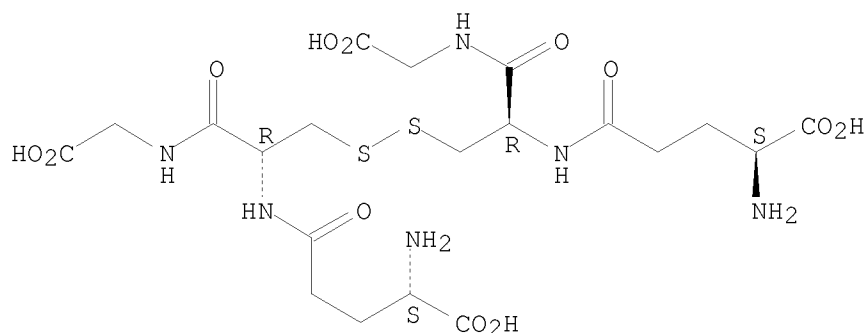
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(susceptibilities of human plasma antioxidants and erythrocyte constituents to low levels of ozone)

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 19 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:117814 CAPLUS

DOCUMENT NUMBER: 130:264995

TITLE: Foliar antioxidant status of plants from naturally high-CO<sub>2</sub> sites

AUTHOR(S): Badiani, Maurizio; Paolacci, Anna Rita; Fusari, Angelo; Bettarini, Isabella; Brugnoli, Enrico; Lauteri, Marco; Miglietta, Franco; Raschi, Antonio

CORPORATE SOURCE: Dipto di Agrobiologia e Agrochimica, Univ. della Tuscia, Viterbo, I-01100, Italy

SOURCE: Physiologia Plantarum (1998), 104(4), 765-771

CODEN: PHPLAI; ISSN: 0031-9317

PUBLISHER: Munksgaard International Publishers Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The foliar antioxidant status of native *Agrostis stolonifera* L. communities growing at two distinct CO<sub>2</sub>-enriched sites of geothermal origin (E) was compared to a control field location with normal CO<sub>2</sub>. Compared to the control, plants from both E-sites showed an increased size of the GSH pool, essentially due to enhanced GSSG levels, and a consequent decrease in the ratio between reduced and oxidized glutathione forms. Such differences were maintained and even enhanced in the vegetatively-propagated progenies of control and E-plants, grown under both greenhouse conditions and normal CO<sub>2</sub> levels. The above results confirmed previous observations on native and crop plants exposed to elevated CO<sub>2</sub>. It is therefore suggested that changes in the glutathione redox balance might be of adaptive significance under conditions of permanent exposure to high CO<sub>2</sub>.

IT 27025-41-8, Oxidized glutathione

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)

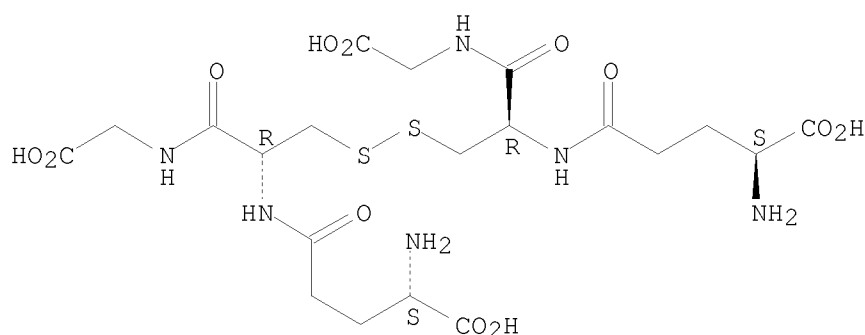
(foliar antioxidant status of plants from naturally high-carbon dioxide sites)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide (CA INDEX NAME)

Absolute stereochemistry.





REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 20 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:117813 CAPLUS

DOCUMENT NUMBER: 130:264994

TITLE: Antioxidative defense and photoprotection in pine needles under field conditions. A multivariate approach to evaluate patterns of physiological responses at natural sites

AUTHOR(S): Tausz, Michael; Jimenez, Maria Soledad; Grill, Dieter

CORPORATE SOURCE: Inst. fur Pflanzenphysiologie, Univ. Graz, Schubertstrasse, Graz, A-8010, Austria

SOURCE: Physiologia Plantarum (1998), 104(4), 760-764

CODEN: PHPLAI; ISSN: 0031-9317

PUBLISHER: Munksgaard International Publishers Ltd.

DOCUMENT TYPE: Journal

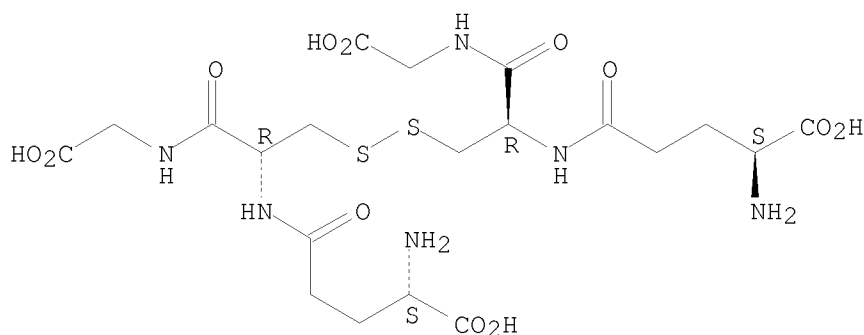
LANGUAGE: English

AB Measurements of antioxidants and chloroplast pigments have been widely used as markers of stress and vitality of conifers in the field. However, due to the high variability of these data and the multiple environmental influences trees are exposed to, a quantification of physiol. stress responses has only scarcely been possible. Physiol. stress responses cannot be monitored by single stress markers, but are governed by many different interactions. The objective of this study was to evaluate patterns of biochem. stress markers in an objective and repeatable manner. For this purpose, a data set of 12 stress-physiol. variables (chloroplast pigments, epoxidn. state of the xanthophyll cycle,  $\alpha$ -tocopherol, ascorbate and dehydroascorbate, GSH and GSSG) measured on field-grown *Pinus canariensis* needles ( $n = 90$ ) was subjected to explorative statistical techniques. Four principal components (PC), which explained 80% of the variance of the original data, were extracted by principal component anal. According to stress-physiol. principles, complex responses were assigned to these PCs. Principal component 1 was pos. affected by concns. of  $\alpha$ -tocopherol and total ascorbate, and neg. by the proportion of epoxides in the xanthophyll cycle and by  $\alpha$ -carotene contents. Principal component 2 was composed of chlorophyll, lutein, neoxanthin, and  $\beta$ -carotene contents, PC 3 contained information about GSH concns. and the proportions of GSSG and dehydroascorbate; and PC 4 mainly comprised the pool size of the xanthophyll cycle. These components could be ascribed physiol. principles such as antioxidative response in chloroplasts (PC 1), pigment content (PC 2), or antioxidant regeneration (PC 3). Via cluster anal. a classification of samples was made based on the patterns of their PC scores. The resulting clusters represented typical physiol. response patterns: Cluster 1 was related to initial stages of oxidative damage, cluster 2 to antioxidative responses, whereas cluster 3 represented healthy trees. The spatial distribution of members of these clusters among field plots revealed that different response patterns could be observed

at the same plot, a fact that might be ascribed to small scale differences and/or individually differing resistances, and something that is frequently overlooked in the field.

IT 27025-41-8, Oxidized glutathione  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
(antioxidative defense and photoprotection in pine needles under field conditions and multivariate approach to evaluate patterns of physiol. responses at natural sites)  
RN 27025-41-8 CAPLUS  
CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



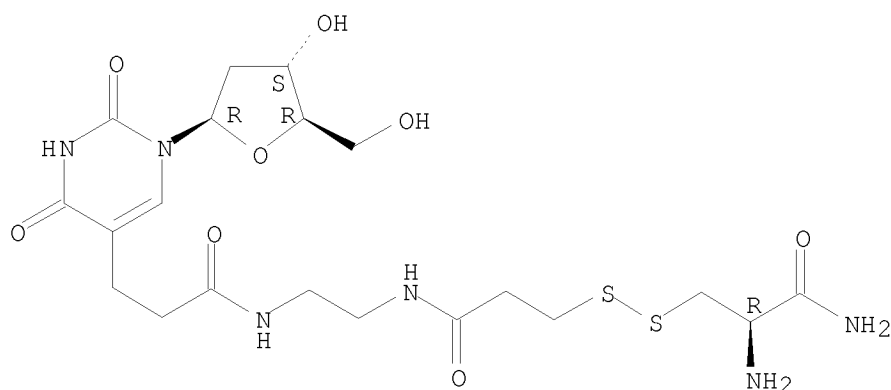
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 21 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1999:108485 CAPLUS  
DOCUMENT NUMBER: 130:223555  
TITLE: Synthesis of reversible nucleoside amino acid conjugates  
AUTHOR(S): Sondhi, S. M.; Xie, J.; Modak, A. S.; Bashkin, J. K.  
CORPORATE SOURCE: Department of Chemistry, University of Roorkee, Roorkee, 247667, India  
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1998), 37B(11), 1097-1103  
CODEN: IJSBDB; ISSN: 0376-4699  
PUBLISHER: National Institute of Science Communication, CSIR  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 130:223555

AB A general synthetic method to conjugate cysteine-containing peptides to nucleosides via a disulfide link has been developed, using the heterobifunctional reagent N-succinimidyl 3-(2-pyridylthio)propionate (SPDP) and amino-modified nucleosides. Representative compds. based on C-6 modified adenosine, C-5 modified uridine and 2'-deoxyuridine are reported, along with extensive NMR characterizations of these novel nucleosides.

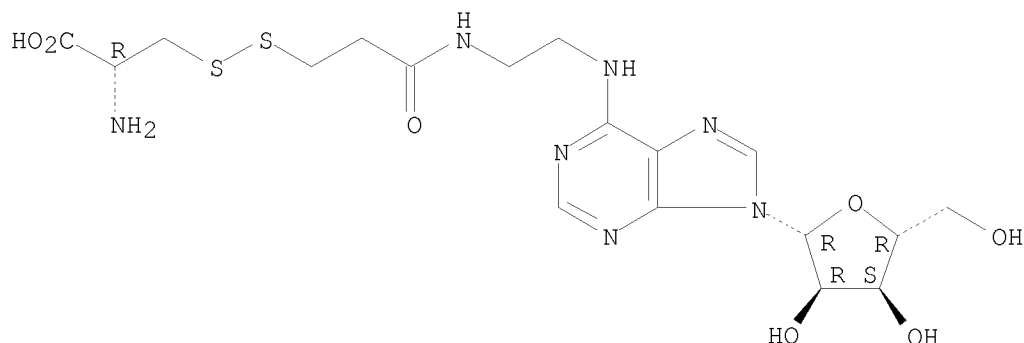
IT 221209-22-9P 221209-26-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of disulfide-linked nucleoside-amino acid conjugates)  
RN 221209-22-9 CAPLUS  
CN Uridine, 2'-deoxy-5-[3-[[[2-[[[3-[[[(2R)-2,3-diamino-3-oxopropyl]dithio]-1-oxopropyl]amino]ethyl]amino]-3-oxopropyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 221209-26-3 CAPLUS  
 CN L-Alanine, 3-[[[3-oxo-3-[[2-[(9-β-D-ribofuranosyl-9H-purin-6-yl)amino]ethyl]amino]propyl]dithio]- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 22 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:73800 CAPLUS  
 DOCUMENT NUMBER: 130:219650  
 TITLE: Chaperonin GroE-facilitated refolding of disulfide-bonded and reduced Taka-amylase A from *Aspergillus oryzae*  
 AUTHOR(S): Kawata, Yasushi; Hongo, Kunihiro; Mizobata, Tomohiro; Nagai, Jun  
 CORPORATE SOURCE: Department of Biotechnology, Faculty of Engineering, Tottori University, Tottori, 680-0945, Japan  
 SOURCE: Protein Engineering (1998), 11(12), 1293-1298  
 CODEN: PRENE9; ISSN: 0269-2139  
 PUBLISHER: Oxford University Press  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The refolding characteristics of Taka-amylase A (TAA) from *Aspergillus oryzae* in the presence of the chaperonin GroE were studied in terms of activity and fluorescence. Disulfide-bonded (intact) TAA and non-disulfide-bonded (reduced) TAA were unfolded in guanidine hydrochloride and refolded by dilution into buffer containing GroE. The intermediates of both intact and reduced enzymes were trapped by GroEL in the absence of nucleotide. Upon addition of nucleotides such as ATP, ADP, CTP or UTP, the intermediates were released from GroEL and recovery of

activity was detected. In both cases, the refolding yields in the presence of GroEL and ATP were higher than spontaneous recoveries. Fluorescence studies of intrinsic tryptophan and a hydrophobic probe, 8-anilidonaphthalene-1-sulfonate, suggested that the intermediates trapped by GroEL assumed conformations with different hydrophobic properties. The presence of protein disulfide isomerase or reduced and oxidized forms of glutathione in addition to GroE greatly enhanced the refolding reaction of reduced TAA. These findings suggest that GroE has an ability to recognize folding intermediates of TAA protein and facilitate refolding, regardless of the existence or absence of disulfide bonds in the protein.

IT 27025-41-8, Oxidized glutathione

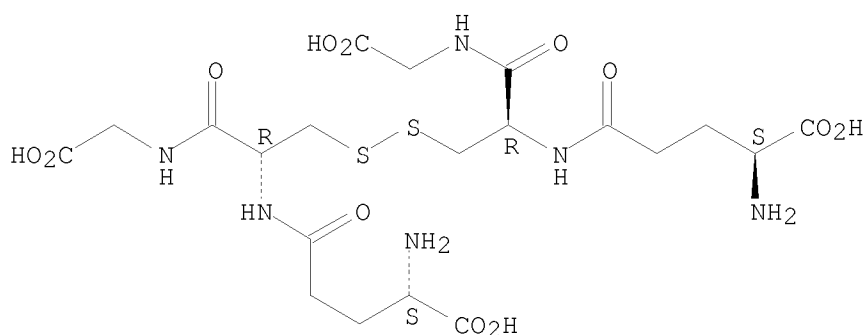
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(chaperonin groE-facilitated refolding of disulfide-bonded and reduced Taka-amylase A (TAA) from *Aspergillus oryzae*)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 23 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:70541 CAPLUS

DOCUMENT NUMBER: 130:179456

TITLE: Determination of reduced-form glutathione in blood and plasma by high performance liquid chromatography with on-column fluorescence derivatization. [Erratum to document cited in CA130:107066]

AUTHOR(S): Fukunaga, K.; Nakazono, N.; Yoshida, M.

CORPORATE SOURCE: Dep. Public Health, Kansai Medical Univ., Moriguchi, 570, Japan

SOURCE: Chromatographia (1998), 48(11/12), 832

CODEN: CHRGB7; ISSN: 0009-5893

PUBLISHER: Friedrich Vieweg & Sohn Verlagsgesellschaft mbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB There was an error in the 'Editor's note' which should read as follows:  
"The quantitation is performed at the break-through time of the mobile phase. In this case it may be possible, because the authors prove that with their anal. system no other solute interferes in the OPderivatization reaction."

IT 27025-41-8, GSSG

RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)

(determination of reduced-form glutathione and total glutathione in blood

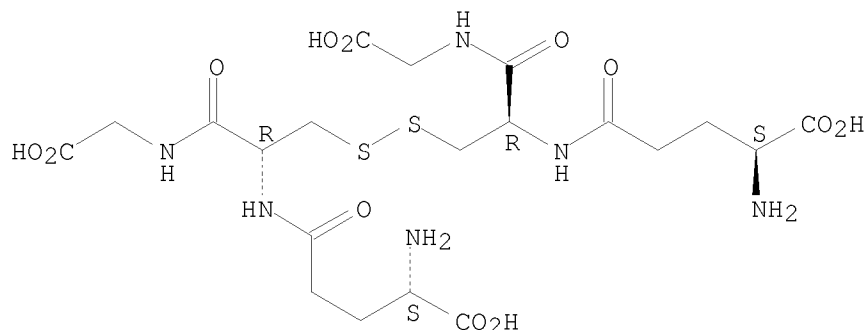
and

plasma by high performance liquid chromatog. with on-column fluorescence derivatization (Erratum))

RN 27025-41-8 CAPLUS

CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 24 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:64332 CAPLUS

DOCUMENT NUMBER: 130:307840

TITLE: Gastric and intestinal ethanol toxicity in the rat.  
Effect on glutathione level and role of alcohol and  
acetaldehyde metabolisms

AUTHOR(S): Altomare, E.; Grattagliano, I.; Didonna, D.; Gentile,  
A.; Vendemiale, G.

CORPORATE SOURCE: Department of Internal and Occupational Medicine,  
Institute of Histology, University of Bari, Bari,  
Italy

SOURCE: Italian Journal of Gastroenterology and Hepatology  
(1998), 30(1), 82-90

CODEN: IJGAFI; ISSN: 1125-8055

PUBLISHER: Pacini Editore

DOCUMENT TYPE: Journal

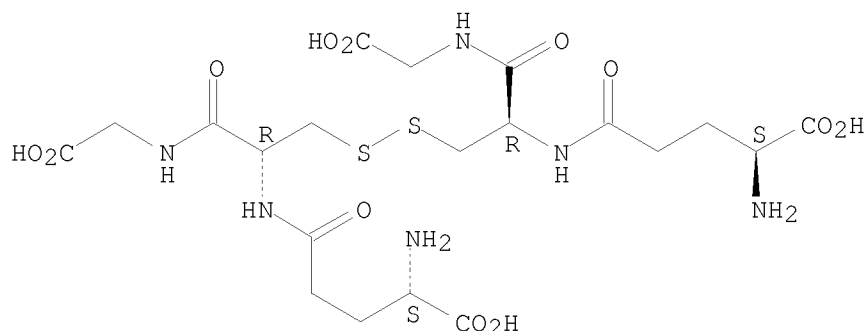
LANGUAGE: English

AB This study investigated the dose- and time-dependent effect of ethanol on gastric and intestinal glutathione and protein oxidative state in the rat. Rats received 1 or 4 g/kg of 25% ethanol solution orally or isocaloric glucose. Some rats received diethylmaleate, cimetidine or cyanamide before ethanol (1 g/kg). Glutathione, carbonyl proteins and histol. damage were evaluated in the gastric and intestinal mucosa 6 h after treatment. An increase in glutathione was observed 2 to 6 h after 1 g/kg of ethanol both in the gastric and intestinal mucosa, whereas 4 g/kg decreased glutathione. The rise in glutathione after ethanol was associated with increased levels of its oxidized form; however, the total/oxidized ratio was significantly decreased only in the intestinal tract. Diethylmaleate depleted mucosal glutathione, while the subsequent ingestion of ethanol increased it. Unlike stomach, intestine showed a significant increase in carbonyl proteins and marked histol. lesions after ethanol ingestion. Cimetidine and cyanamide inhibited by 50% the activity of alc. dehydrogenase and by 80% aldehyde dehydrogenase, resp., in the gastric and intestinal mucosa. Cyanamide significantly enhanced ethanol-induced protein oxidation and mucosal injury in the stomach. No such effect was observed in the intestine. The increase of glutathione after ingestion of low amts. of ethanol appears to be an adaptive mechanism against ethanol toxicity. Depletion of glutathione increased protein oxidation and the extent of histol. damage in ethanol-treated rats. At gastric level, the effects of ethanol are exaggerated by the inhibition of

acetaldehyde metabolism; while intestinal damages appear to be ascribed to ethanol itself.

IT 27025-41-8, GSSG  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(gastric and intestinal ethanol toxicity in the rat and effect on glutathione level and role of alc. and acetaldehyde metab.)  
RN 27025-41-8 CAPLUS  
CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

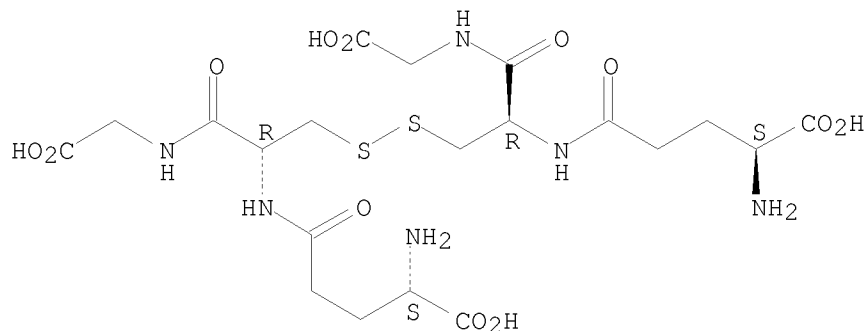
L22 ANSWER 25 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1999:64296 CAPLUS  
DOCUMENT NUMBER: 130:266677  
TITLE: Effect of dietary vitamin E on antioxidant status and antioxidant enzyme activities in Sprague-Dawley rats  
AUTHOR(S): Lii, Chong-Kuei; Ko, Yuh-Jane; Chiang, Ming-Tsai; Sung, Wei-Che; Chen, Haw-Wen  
CORPORATE SOURCE: Department of Nutrition, Chung Shan Medical College, Taichung, 40203, Taiwan  
SOURCE: Nutrition and Cancer (1998), 32(2), 95-100  
CODEN: NUCADQ; ISSN: 0163-5581  
PUBLISHER: Lawrence Erlbaum Associates, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The effects of dietary vitamin E on blood plasma, red blood cells (RBC) and liver antioxidant status and on antioxidant enzyme activities were investigated in 3 groups of 6 Sprague-Dawley rats. The rats were fed 0, 100, or 1500 ppm vitamin E (tocopheryl acetate) for 8 wk. Blood plasma  $\alpha$ -tocopherol levels increased with dietary vitamin E. Plasma lipid peroxidn. (thiobarbituric acid-reactive substances) stimulation by 1 mM tert-Bu hydroperoxide correlated with dietary vitamin E levels and was greater in rats fed no vitamin E than in rats fed 100 or 1500 ppm vitamin E. RBC reduced glutathione (GSH) levels pos. correlated with dietary vitamin E and were greater in rats fed 1500 ppm vitamin E than in rats fed 0 or 100 ppm vitamin E. RBC oxidized glutathione levels correlated neg. with dietary vitamin E levels. GSH redox status was expressed as the GSH/total GSH ratio; the ratio also pos. correlated with dietary vitamin E levels and was greater in rats fed 1500 ppm vitamin E than in rats fed no vitamin E. The superoxide dismutase activity in hepatic cytosolic fraction was greater in rats fed 1500 ppm vitamin E than in rats fed 100 ppm vitamin E. Hepatic GSH reductase activity was greater in rats fed 100 ppm vitamin E than in rats fed no vitamin E. Dietary vitamin E had no effect on plasma vitamin C and protein thiol levels. Thus, dietary

vitamin E selectively influences blood plasma vitamin E levels, RBC GSH status, and hepatic cytosolic superoxide dismutase and GSH reductase activities.

IT 27025-41-8, Oxidized glutathione  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(dietary vitamin E effects on glutathione and antioxidant enzyme activities blood and liver of rats)  
RN 27025-41-8 CAPLUS  
CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 26 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:64222 CAPLUS

DOCUMENT NUMBER: 130:332204

TITLE: Design and assay of inhibitors of HIV-1 Vpr cell killing and growth arrest activity using microbial assay systems

AUTHOR(S): Sankovich, Sonia E.; Koleski, Daniela; Baell, Jonathan; Matthews, Barry; Azad, Ahmed A.; Macreadie, Ian G.

CORPORATE SOURCE: Biomolecular Research Institute, Parkville, 3052, Australia

SOURCE: Journal of Biomolecular Screening (1998), 3(4), 299-304

CODEN: JBISF3; ISSN: 1087-0571

PUBLISHER: Mary Ann Liebert, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Viral protein R (Vpr), one of the accessory gene products encoded by the human immunodeficiency virus type 1 (HIV-1) genome, has a number of functions, including causing a growth arrest of HIV-1-infected cells and possibly the death of uninfected bystander cells. In microbial assay systems, the C-terminal portion of Vpr can cause cell death when added externally, and when expressed in yeast it causes growth arrest. In this study we have sought to obtain inhibitors of the Vpr functions that affect the microbial systems. Our first approach employed peptide display, which identified a number of sequences, including a heptapeptide sequence, GETRAPL, involved in binding to the C-terminus of Vpr. To determine whether GETRAPL could block the extracellular cytocidal activity of Vpr, the heptapeptide was synthesized and found to have some blocking activity in microbial assays. A second approach led to the finding that melittin inhibitors had activity against Vpr extracellular activities. In a third approach, compds. were tested against the Vpr-induced growth arrest. A number of

compds. were found to abrogate the growth arrest, and some also inhibited Vpr's extracellular activity.

IT 205587-95-7 205588-02-9 224156-10-9

RL: ANT (Analyte); BAC (Biological activity or effector, except adverse);  
BSU (Biological study, unclassified); THU (Therapeutic use); ANST  
(Analytical study); BIOL (Biological study); USES (Uses)

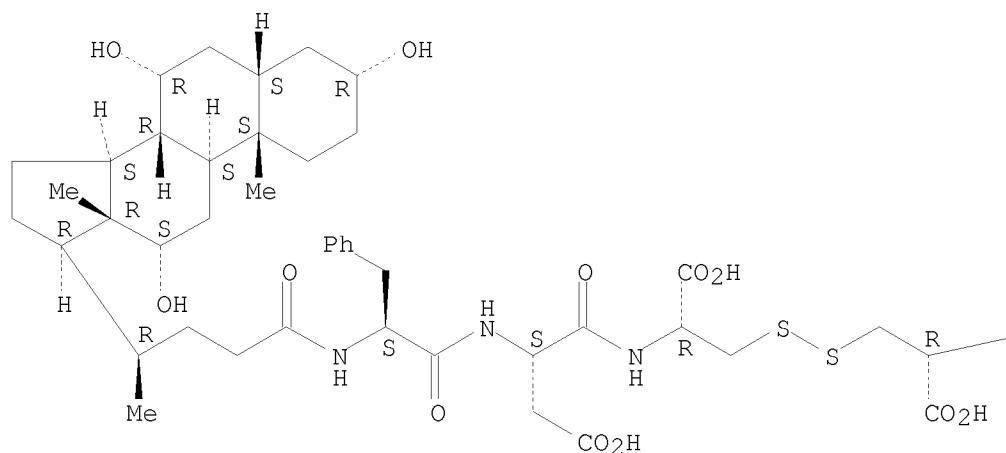
(design and assay of inhibitors of HIV-1 Vpr cell killing and growth  
arrest activity using microbial assay systems)

RN 205587-95-7 CAPLUS

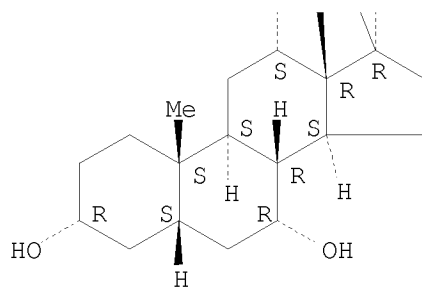
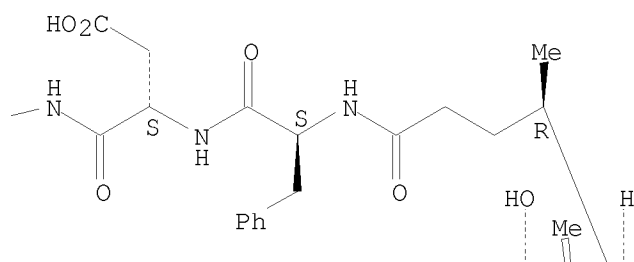
CN L-Cysteine, N-[(3 $\alpha$ , 5 $\beta$ , 7 $\alpha$ , 12 $\alpha$ )-3, 7, 12-trihydroxy-24-  
oxocholan-24-yl]-L-phenylalanyl-L- $\alpha$ -aspartyl-, bimol.  
(3 $\rightarrow$ 3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

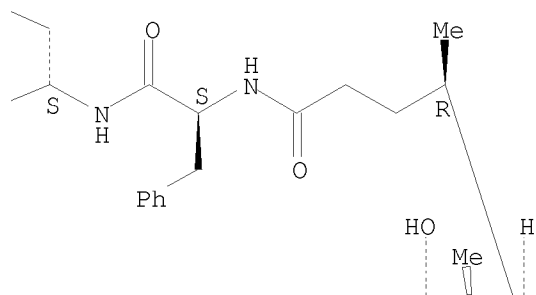
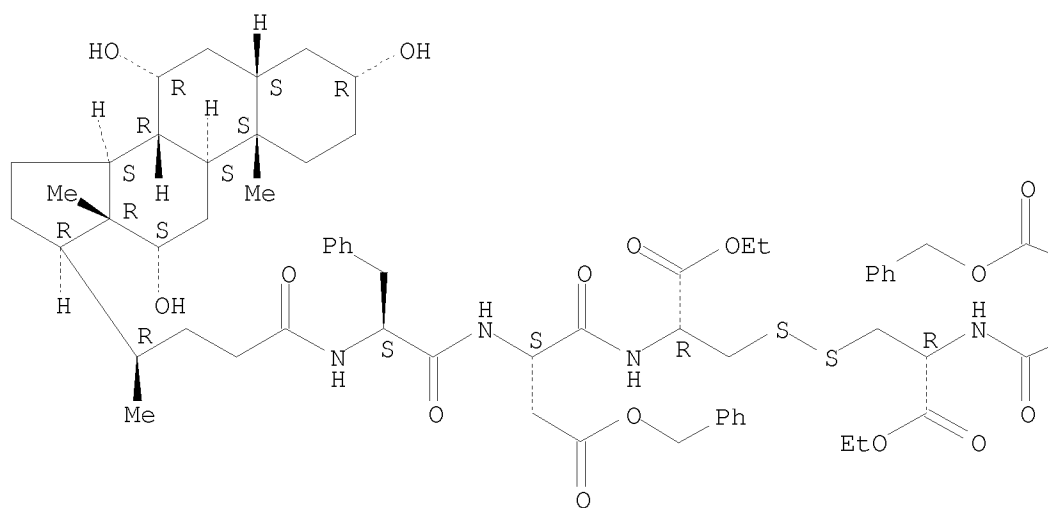


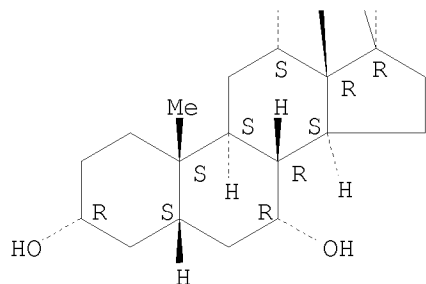




RN 205588-02-9 CAPLUS  
 CN L-Cysteine, N-[(3 $\alpha$ , 5 $\beta$ , 7 $\alpha$ , 12 $\alpha$ )-3, 7, 12-trihydroxy-24-oxocholan-24-yl]-L-phenylalanyl-L- $\alpha$ -aspartyl-, 3-ethyl 2-(phenylmethyl) ester, bimol. (3 $\rightarrow$ 3')-disulfide (9CI) (CA INDEX NAME)

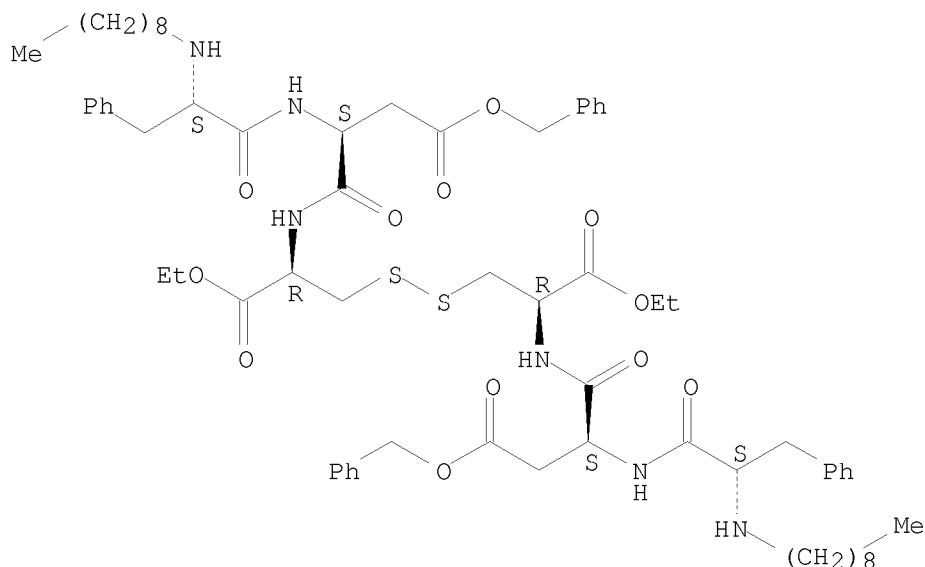
Absolute stereochemistry.





RN 224156-10-9 CAPLUS  
 CN L-Cysteine, N-nonyl-L-phenylalanyl-L- $\alpha$ -aspartyl-, 3-ethyl  
 2-(phenylmethyl) ester, bimol. (3 $\rightarrow$ 3')-disulfide (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.



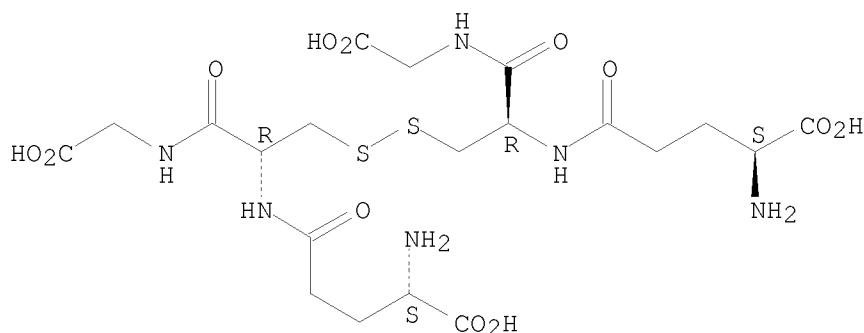
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 27 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:57955 CAPLUS  
 DOCUMENT NUMBER: 130:264849  
 TITLE: Antioxidative systems, pigment and protein contents in  
 leaves of adult Mediterranean oak species (*Quercus*  
*pubescens* and *Q. ilex*) with lifetime exposure to  
 elevated CO<sub>2</sub>  
 AUTHOR(S): Schwanz, P.; Polle, A.  
 CORPORATE SOURCE: Inst. Forstbotanik Baumphysiologie, Albert-Ludwigs  
 Univ. Freiburg, Freiburg, D-79085, Germany  
 SOURCE: New Phytologist (1998), 140(3), 411-423  
 CODEN: NEPHAV; ISSN: 0028-646X  
 PUBLISHER: Cambridge University Press  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The aim of the present study was to investigate the effects of elevated  
 CO<sub>2</sub> on the antioxidative systems and the contents of pigments, soluble  
 protein and lipid peroxidn. in leaves of adult oaks, *Quercus pubescens* and

*Quercus ilex*, grown at naturally enriched CO<sub>2</sub> concns. For this purpose, a field study was conducted at two CO<sub>2</sub> springs in Central Italy. Measurements of the predawn water potentials indicated less drought stress in trees close to CO<sub>2</sub> springs than in those grown at ambient CO<sub>2</sub> concns. Most leaf constituents investigated showed significant variability between sampling dates, species and sites. The foliar contents of protein and chlorophylls were not affected in trees grown close to the CO<sub>2</sub> vents compared with those in ambient conditions. Increases in glutathione and other soluble thiols were observed, but these responses might have been caused by a low pollution of the vents with sulfurous gases. At CO<sub>2</sub> vents, glutathione reductase was unaffected, and superoxide dismutase activity was significantly diminished, in both species. Generally, the activities of catalase, guaiacol peroxidase and ascorbate peroxidase as well as the sum of dehydroascorbate and ascorbate were decreased in leaves from trees grown in naturally CO<sub>2</sub>-enriched environments compared with those grown at ambient CO<sub>2</sub> concns. The reduction in protective enzymes did not result in increased lipid peroxidn., but increased monodehydroascorbate radical reductase and dehydroascorbate reductase activities found in leaves of *Q. pubescens* suggest that the smaller pool of ascorbate was subjected to higher turnover rates. These data show that changes in leaf physiol. persist, even after lifetime exposure to enhanced atmospheric CO<sub>2</sub>. The results suggest that the down-regulation of protective systems, which has also previously been found in young trees or seedlings under controlled exposure to elevated CO<sub>2</sub> concns., might reflect a realistic response of antioxidative defenses in mature trees in a future high-CO<sub>2</sub> world.

IT 27025-41-8, GSSG  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (antioxidative systems, contents of pigments and soluble protein, and lipid peroxidn. in leaves of Mediterranean oak species at naturally CO<sub>2</sub>-enriched sites)  
 RN 27025-41-8 CAPLUS  
 CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
 (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 28 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:55122 CAPLUS  
 DOCUMENT NUMBER: 130:138670  
 TITLE: Effect of tocopherol deficiency and supplementation with tocopherol, dibunol and sodium selenite on the activity of rat liver enzymes metabolizing N-nitrosodimethylamine  
 AUTHOR(S): Istoshin, V. M.; Pentyuk, O. O.; Matviichuk, M. V.  
 CORPORATE SOURCE: Vinnitskii Derzh. Med. Univ. im. M.I. Pirogova,

Vinnitsa, Ukraine

SOURCE: Ukrainskii Biokhimi cheskii Zhurnal (1998), 70(4), 110-117  
CODEN: UBZHD4; ISSN: 0201-8470

PUBLISHER: Institut Biokhimii im. A. V. Palladina NAN Ukrainy

DOCUMENT TYPE: Journal

LANGUAGE: Ukrainian

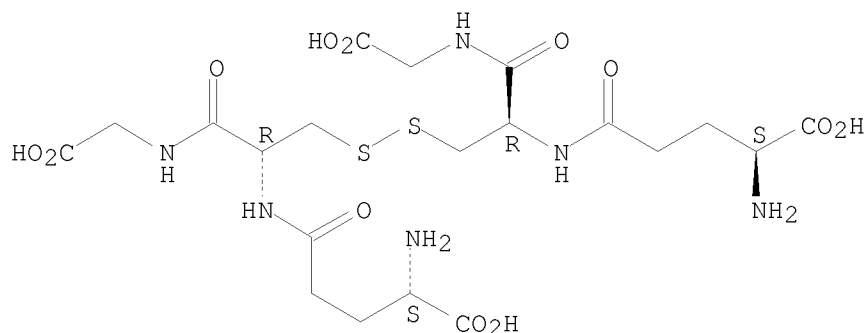
AB The dietary tocopherol deficiency is accompanied by decreased hydroxylase, demethylase, NADH- and NADPH-reductase, aldehyde dehydrogenase, aryl esterase, and glutathione reductase activities in the rat liver. The deficiency decreases the reduced glutathione and increases the oxidized glutathione concns. The stability of microsomal membranes towards solubilizing effects of deoxycholate and trypsin is decreased. These changes in enzymic functions and microsomal membranes may enhance the toxic and carcinogenic effects of nitrosodimethylamine (NDMA) in tocopherol-deficient rats. A 1-wk treatment with daily doses of tocopherol acetate (20 and 100 mg/kg orally), dibunol (80 mg/kg orally), and Na selenite (30 µg Se/kg i.p.) increased the activities of aldehyde dehydrogenase, esterase, and glutathione-dependent enzymes, increased the levels of reduced glutathione in the liver, suppressed lipid peroxidn., and increased the survival of rats treated with NDMA (10 mg/kg i.p.). Thus, tocopherol supplementation decreased the harmful effects of NDMA on microsomal membranes and enzymic activities.

IT 27025-41-8, Oxidized glutathione  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(tocopherol dietary deficiency and supplementation with tocopherol, dibunol and Na selenite effects on microsomal membranes and activity of rat liver enzymes metabolizing N-nitrosodimethylamine)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 29 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:52976 CAPLUS

DOCUMENT NUMBER: 130:206485

TITLE: Improved folding yields of a model protein using protein disulfide isomerase

AUTHOR(S): Du, Chengan; Ye, Jennifer M.; Wolfe, Janet L.

CORPORATE SOURCE: Department of Pharmaceutical Sciences, College of Pharmacy, University of Tennessee, Memphis, TN, 38163, USA

SOURCE: Pharmaceutical Research (1998), 15(12), 1808-1815  
CODEN: PHREEB; ISSN: 0724-8741

PUBLISHER: Plenum Publishing Corp.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB To study the effects of recombinant human protein disulfide isomerase (rhPDI) concentration, reduced glutathione: oxidized glutathione ratio (GSH:GSSG)

and temperature on the efficiency of oxidative folding of a model protein, recombinant human interleukin 2 (C125A mutation) (C125A rhIL-2). C125A rhIL-2 inclusion bodies were reduced and denatured by guanidinium hydrochloride (Gdm.Cl) and 100 mM GSH. The solution was diluted 10 times into folding buffer, allowing C125A rhIL-2 to fold either in the absence or presence of rhPDI. The renatured and unfolded C125A rhIL-2 species were quantitated by reversed phase-HPLC. The initial folding rate of C125A rhIL-2 linearly increased with rhPDI:C125A rhIL-2 molar ratio in the first 2.5 min, and reached the highest rate when the rhPDI:C125A rhIL-2 ratio was 1:1. The oxidative folding of C125A rhIL-2 linearly increased as the GSH:GSSG molar ratio decreased from 10:0 to 10:3. The folding of C125A rhIL-2 was also dependent on temperature, and optimum folding was realized at 23°. These results demonstrate that under optimal redox potential and temperature, rhPDI enhances the oxidative folding of C125A rhIL-2. In the oxidative folding of C125A rhIL-2, rhPDI exerts its effect on folding by the acceleration of thiol/disulfide interchange.

IT 27025-41-8, Oxidized glutathione

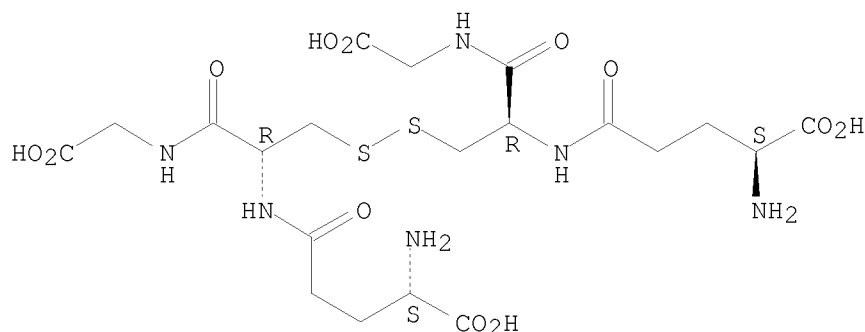
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(improved oxidative folding yields of model protein using protein disulfide isomerase)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 30 OF 5189 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:52950 CAPLUS

DOCUMENT NUMBER: 130:206110

TITLE: Evaluation of hepatic toxicity of seven-day repeated-dose glutathione-depleting regimens in rats  
AUTHOR(S): Robertson, Donald G.; Urda, Ellen M.; Breider, Michael A.; Gauthier, Raylene M.

CORPORATE SOURCE: Department of Pathology and Experimental Toxicology, Division of Warner Lambert Company, Parke-Davis Pharmaceutical Research, Ann Arbor, MI, 48106-1047, USA

SOURCE: Toxicology Methods (1998), 8(4), 233-244  
CODEN: TOMEEB; ISSN: 1051-7235

PUBLISHER: Taylor & Francis

DOCUMENT TYPE: Journal  
LANGUAGE: English

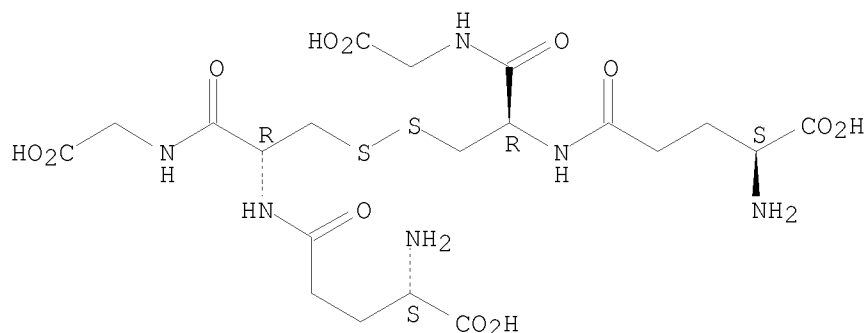
AB Glutathione (GSH) depletion is a common method for examining the role of oxidative stress in the toxicity of novel compds. Several treatment regimens for inducing hepatic GSH depletion in rats were examined for their suitability for use in a 7-day repeated-dose paradigm. Male Wistar rats (5/treatment) were administered either 2,6-dimethyl-2,5-heptadien-4-one (phorone, 250 mg/kg i.p.), di-Et maleate (DEM, 600 mg/kg i.p.), ethanol in drinking water (150 mL/L), or L-buthionine-SR-sulfoximine (BSO) in drinking water (4.446 g/L) with and without supplemental i.p. administration (890 mg/kg bid) for 7 days. Addnl. groups of 5 animals were given phorone or DEM and sacrificed 2 h after dose. Significant body weight gain suppression relative to control was evident in all treated groups but only animals given the i.p./water BSO treatment resulted in mean weight loss (4%). Liver wts. were significantly increased by 7 days of phorone treatment and decreased by i.p./water BSO treatment. No clin. significant effects were noted on hepatic serum chemical parameters. No hepatic histopathol. was produced by any treatment, but phorone produced increased hepatocellular mitoses. BSO administered in the drinking water without supplemental i.p. administration appeared to be the most suitable model for routine assessment of hepatic GSH depletion in mechanistic models. The model was practical, did not induce hepatic pathol., and produced marked decreases in hepatic cytosolic GSH and moderate decreases in hepatic mitochondrial GSH.

IT 27025-41-8, GSSG  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(evaluation of hepatic toxicity of seven-day repeated-dose glutathione-depleting regimens in rats)

RN 27025-41-8 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, bimol. (2→2')-disulfide  
(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> s l19 not l23  
L24 5210 L19 NOT L23

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FILE LAST UPDATED: 20 Aug 2008 (20080820/ED)

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=> s 124

L25 4210 L24

=> s 125 not glutathione

101994 GLUTATHIONE

L26 3776 L25 NOT GLUTATHIONE

=> s 126 not py > 1998

10760041 PY > 1998

L27 2810 L26 NOT PY > 1998

=> d 127 ibib abs hitstr 1-50

L27 ANSWER 1 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:359355 CAPLUS

DOCUMENT NUMBER: 131:179676

TITLE: Biological evaluation of compounds for their physical dependence potential and abuse liability. XXI. Drug evaluation committee of the college on problems of drug dependence (1997)

AUTHOR(S): Jacobson, A. E.

CORPORATE SOURCE: Laboratory of Medicinal Chemistry, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, USA

SOURCE: NIDA Research Monograph (1998), Volume Date 1997, 178(Problems of Drug Dependence, 1997), 346-362

CODEN: MIDAD4; ISSN: 0361-8595

PUBLISHER: National Institute on Drug Abuse

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The drug evaluation committee (DEC) of the NIH evaluated the dependence potential and abuse liability of a number of new compds.

IT 203498-62-8

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(evaluation of compds. for their phys. dependence potential and abuse liability)

RN 203498-62-8 CAPLUS

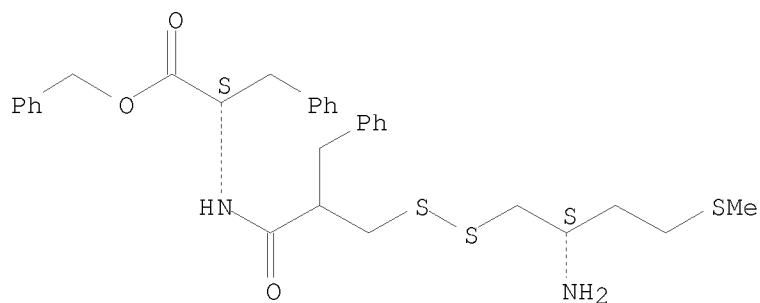
CN L-Phenylalanine, N-[2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester, methanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 135949-60-9

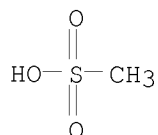
CMF C31 H38 N2 O3 S3

Absolute stereochemistry.



CM 2

CRN 75-75-2  
CMF C H4 O3 S



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:269813 CAPLUS

DOCUMENT NUMBER: 131:59888

TITLE: Examination of subunit composition of bombyx mori silk fibroin

AUTHOR(S): Cai, Zaisheng; Yu, Tongyin

CORPORATE SOURCE: Textile Chemical Engineering Department, China Textile University, Shanghai, 200051, Peop. Rep. China

SOURCE: Journal of China Textile University (English Edition) (1998), 15(2), 28-31

CODEN: JCTUE2; ISSN: 1000-1484

PUBLISHER: China Textile University

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Main subunits of the silk fibroin were separated by GFC (gel filtration chromatog.) technique. The native silk fibroin and a, c subunits were measured by gel electrophoresis. The amino acid compns. of the native silk fibroin and a, c subunits were analyzed by means of amino acid measurement. Some properties of silk was interpreted in view of subunit composition of silk fibroin.

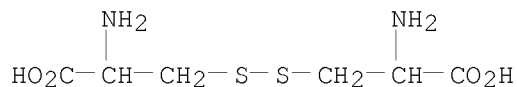
IT 923-32-0, Cystine

RL: ANT (Analyte); ANST (Analytical study)

(examination of subunit composition of bombyx mori silk fibroin)

RN 923-32-0 CAPLUS

CN Cystine (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS

L27 ANSWER 3 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:178518 CAPLUS

DOCUMENT NUMBER: 131:13829

TITLE: Effects of  $\mu$ -,  $\delta$ -, and  $\kappa$ -opioid agonists and enkephalinase inhibitor RB101 in two inbred rat strains

AUTHOR(S): Sudakov, S. K.; Lyupina, Yu. V.; Medvedeva, O. F.; Tyurina, I. V.; Maldonado, R.

CORPORATE SOURCE: Laboratory Neurobiology Craving, Research Center Addiction, Ministry Health, Moscow, Russia

SOURCE: Bulletin of Experimental Biology and Medicine (Translation of Byulleten Eksperimental'noi Biologii i Meditsiny) (1998), 125(5), 490-492  
CODEN: BEXBAN; ISSN: 0007-4888

PUBLISHER: Consultants Bureau

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Analgesic and suppressive effects of selective  $\mu$ - (DAGO),  $\delta$ - (DME), and  $\kappa$ - (DAKLI) opioid agonists are compared with those of aminopeptidase N and neutral endopeptidase inhibitor RB101 in WAG/G and Fischer-344 rats. Fischer-344 rats were more susceptible to suppressive effects of DAGO and analgesic effect of DME. It is concluded that in these rats peculiarities of the  $\mu$ - and  $\delta$ -opioid systems determine susceptibility to locomotor depression and analgesia, resp. There is no correlation between effects of DAGO and RB101 in these strains. This implies that depressive effect of RB101 is not mediated through  $\mu$ -opioid systems. In contrast, the effects of DMA on pain sensitivity in WAG/G and F-344 rats are opposite to those of RB101. This suggests that specific features in the activity of cerebral  $\delta$ -opioid system can determine the sensitivity of RB101-induced analgesia.

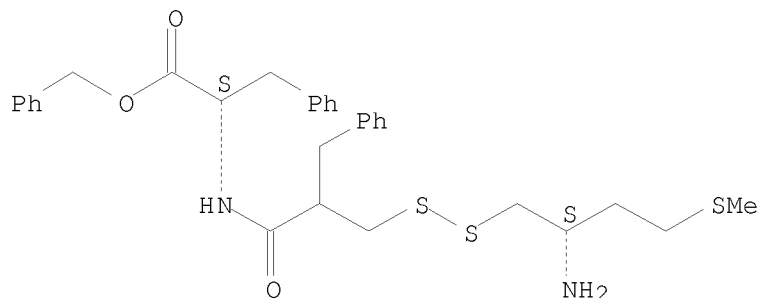
IT 135949-60-9, RB101 base

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(analgesic and suppressive effects of  $\mu$ -,  $\delta$ -, and  $\kappa$ -opioid agonists and enkephalinase inhibitor RB101 in two inbred rat strains)

RN 135949-60-9 CAPLUS

CN L-Phenylalanine, N-[2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

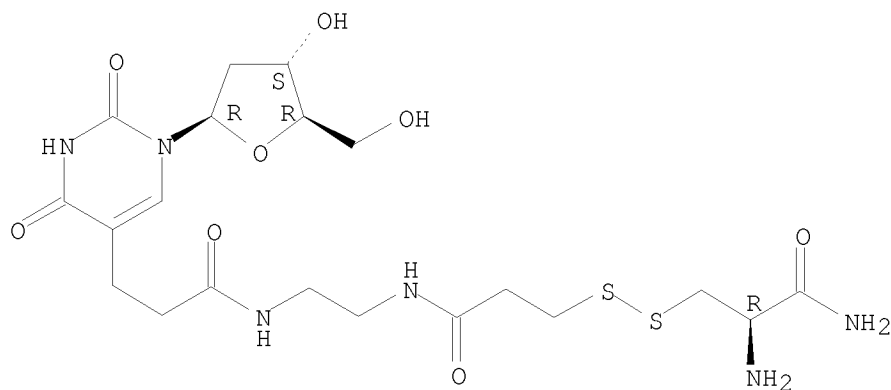
L27 ANSWER 4 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:108485 CAPLUS

DOCUMENT NUMBER: 130:223555

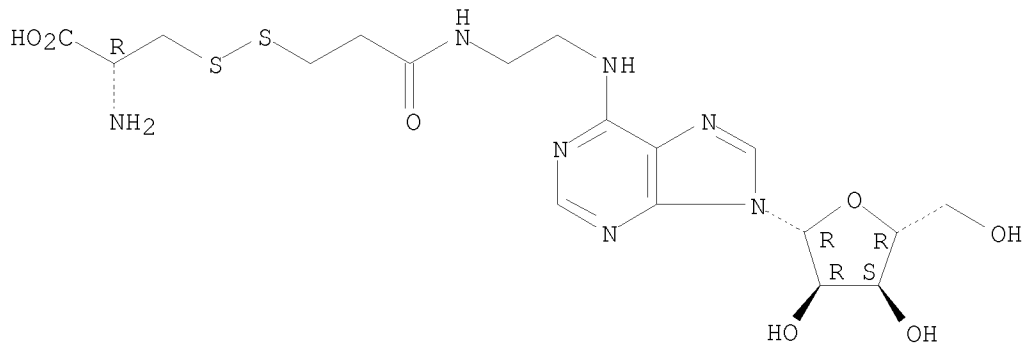
TITLE: Synthesis of reversible nucleoside amino acid conjugates  
 AUTHOR(S): Sondhi, S. M.; Xie, J.; Modak, A. S.; Bashkin, J. K.  
 CORPORATE SOURCE: Department of Chemistry, University of Roorkee, Roorkee, 247667, India  
 SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1998), 37B(11), 1097-1103  
 CODEN: IJSBDB; ISSN: 0376-4699  
 PUBLISHER: National Institute of Science Communication, CSIR  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 130:223555  
 AB A general synthetic method to conjugate cysteine-containing peptides to nucleosides via a disulfide link has been developed, using the heterobifunctional reagent N-succinimidyl 3-(2-pyridylthio)propionate (SPDP) and amino-modified nucleosides. Representative compds. based on C-6 modified adenosine, C-5 modified uridine and 2'-deoxyuridine are reported, along with extensive NMR characterizations of these novel nucleosides.  
 IT 221209-22-9P 221209-26-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of disulfide-linked nucleoside-amino acid conjugates)  
 RN 221209-22-9 CAPLUS  
 CN Uridine, 2'-deoxy-5-[3-[[2-[[3-[[ (2R)-2,3-diamino-3-oxopropyl]dithio]-1-oxopropyl]amino]ethyl]amino]-3-oxopropyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 221209-26-3 CAPLUS  
 CN L-Alanine, 3-[[3-oxo-3-[[2-[[ (9-β-D-ribofuranosyl-9H-purin-6-yl)amino]ethyl]amino]propyl]dithio]- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 5 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:70477 CAPLUS

DOCUMENT NUMBER: 130:245754

TITLE: A covalently linked quinone-ferrocene monolayer-electrode. A pH sensor with an internal reference

AUTHOR(S): Lahav, Michal; Katz, Eugenii; Willner, Itamar

CORPORATE SOURCE: Inst. Chem., Hebrew Univ., Jerusalem, 91904, Israel

SOURCE: Electroanalysis (1998), 10(17), 1159-1162

CODEN: ELANEU; ISSN: 1040-0397

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A covalently linked naphthoquinone-ferrocene pair monolayer was assembled onto a Au-electrode. The electrochem. of the quinone components is pH-controlled, whereas the ferrocene electroactivity is pH-independent. This transforms the functionalized monolayer electrode to a pH-sensor that excludes the need for a reference electrode for pH-determination

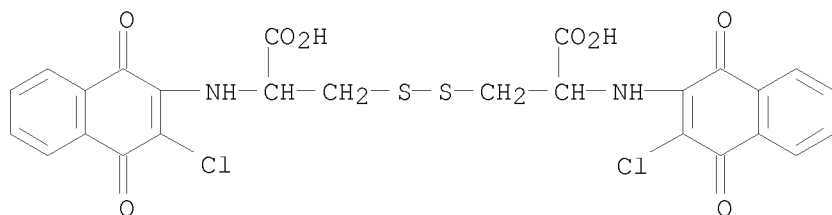
IT 221363-32-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(quinone-ferrocene monolayer electrode used as pH sensor with internal reference)

RN 221363-32-2 CAPLUS

CN Cystine, N,N'-bis(3-chloro-1,4-dihydro-1,4-dioxo-2-naphthalenyl)- (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 6 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:64222 CAPLUS

DOCUMENT NUMBER: 130:332204

TITLE: Design and assay of inhibitors of HIV-1 Vpr cell killing and growth arrest activity using microbial assay systems

AUTHOR(S): Sankovich, Sonia E.; Koleski, Daniela; Baell, Jonathan; Matthews, Barry; Azad, Ahmed A.; Macreadie, Ian G.

CORPORATE SOURCE: Biomolecular Research Institute, Parkville, 3052, Australia

SOURCE: Journal of Biomolecular Screening (1998), 3(4), 299-304

CODEN: JBISF3; ISSN: 1087-0571

PUBLISHER: Mary Ann Liebert, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

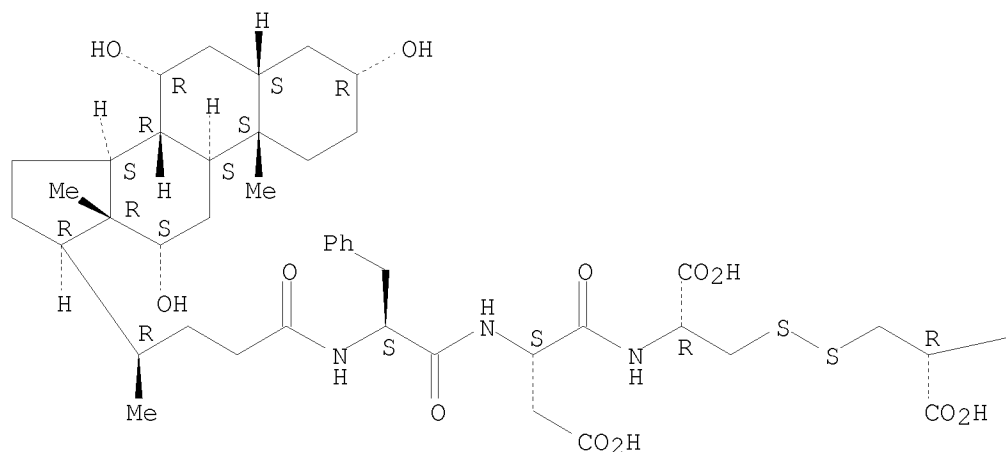
AB Viral protein R (Vpr), one of the accessory gene products encoded by the human immunodeficiency virus type 1 (HIV-1) genome, has a number of

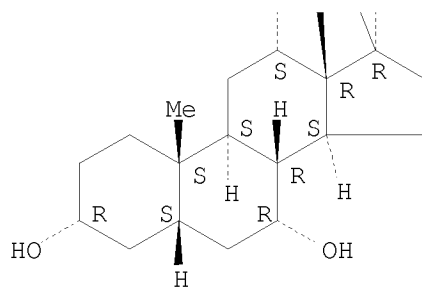
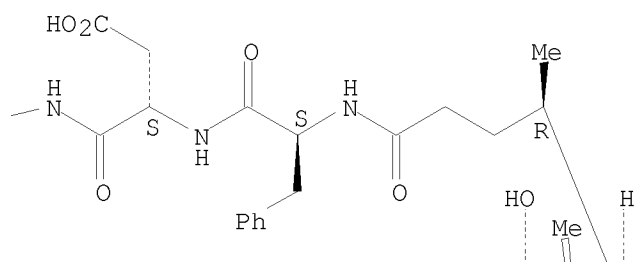
functions, including causing a growth arrest of HIV-1-infected cells and possibly the death of uninfected bystander cells. In microbial assay systems, the C-terminal portion of Vpr can cause cell death when added externally, and when expressed in yeast it causes growth arrest. In this study we have sought to obtain inhibitors of the Vpr functions that affect the microbial systems. Our first approach employed peptide display, which identified a number of sequences, including a heptapeptide sequence, GETRAPL, involved in binding to the C-terminus of Vpr. To determine whether GETRAPL could block the extracellular cytotoxic activity of Vpr, the heptapeptide was synthesized and found to have some blocking activity in microbial assays. A second approach led to the finding that melittin inhibitors had activity against Vpr extracellular activities. In a third approach, compds. were tested against the Vpr-induced growth arrest. A number of compds. were found to abrogate the growth arrest, and some also inhibited Vpr's extracellular activity.

IT 205587-95-7 205588-02-9 224156-10-9  
 RL: ANT (Analyte); BAC (Biological activity or effector, except adverse);  
 BSU (Biological study, unclassified); THU (Therapeutic use); ANST  
 (Analytical study); BIOL (Biological study); USES (Uses)  
 (design and assay of inhibitors of HIV-1 Vpr cell killing and growth  
 arrest activity using microbial assay systems)  
 RN 205587-95-7 CAPLUS  
 CN L-Cysteine, N-[(3 $\alpha$ , 5 $\beta$ , 7 $\alpha$ , 12 $\alpha$ )-3, 7, 12-trihydroxy-24-  
 oxocholan-24-yl]-L-phenylalanyl-L- $\alpha$ -aspartyl-, bimol.  
 (3 $\rightarrow$ 3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

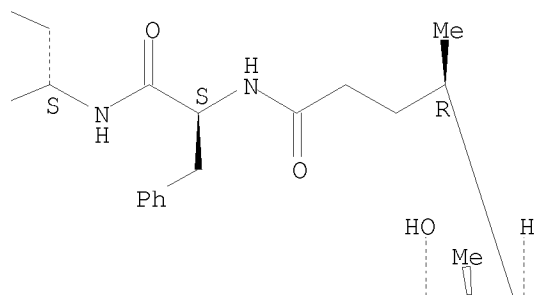
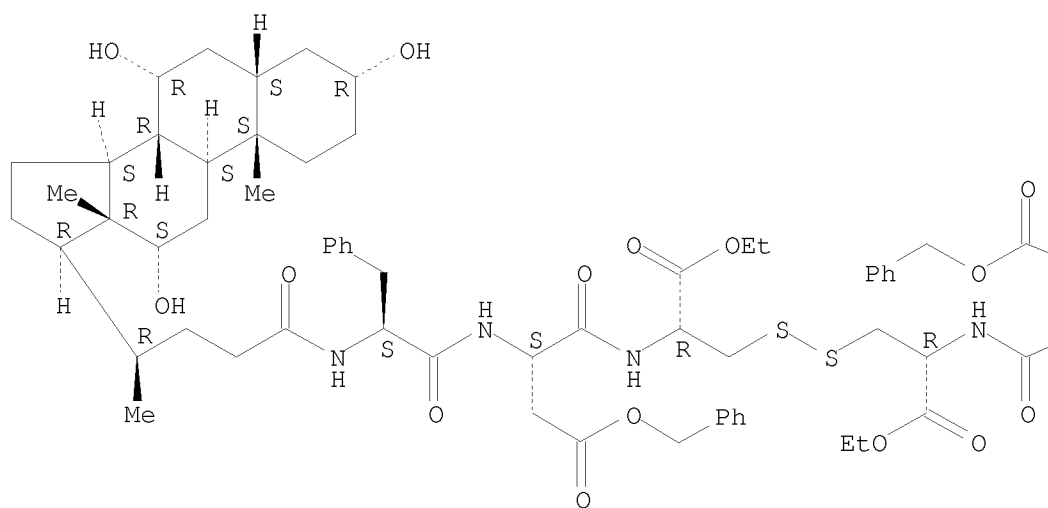
PAGE 1-A



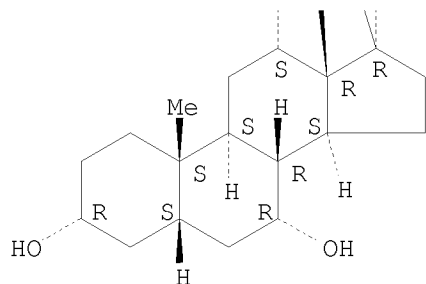


RN 205588-02-9 CAPLUS  
 CN L-Cysteine, N-[(3 $\alpha$ , 5 $\beta$ , 7 $\alpha$ , 12 $\alpha$ )-3, 7, 12-trihydroxy-24-oxocholan-24-yl]-L-phenylalanyl-L- $\alpha$ -aspartyl-, 3-ethyl 2-(phenylmethyl) ester, bimol. (3 $\rightarrow$ 3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

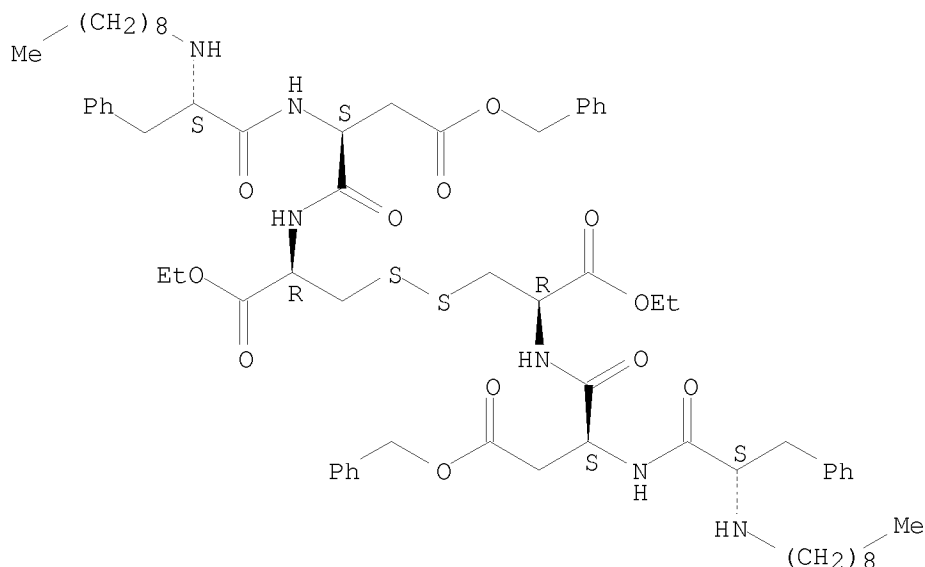






RN 224156-10-9 CAPLUS  
 CN L-Cysteine, N-nonyl-L-phenylalanyl-L- $\alpha$ -aspartyl-, 3-ethyl  
 2-(phenylmethyl) ester, bimol. (3 $\rightarrow$ 3')-disulfide (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 7 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:785271 CAPLUS

DOCUMENT NUMBER: 130:150593

TITLE: Measurement and use of total plasma homocysteine

AUTHOR(S): Goodman, Stephen I.; Elsas, Louis J.; Rosenblatt,  
 David S.

CORPORATE SOURCE: Univ. Colorado Sch. Med., Denver, CO, USA

SOURCE: American Journal of Human Genetics (1998), 63(5),  
 1541-1543

CODEN: AJHGAG; ISSN: 0002-9297

PUBLISHER: University of Chicago Press

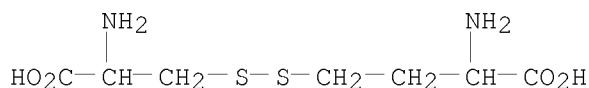
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Hyperhomocysteinemia, which is a recognized independent risk factor for  
 premature vascular occlusion, is defined as a fasting total plasma  
 homocysteine (tHcy) level >15  $\mu$ M. There may also be graded increased  
 risks for persons with tHcy concns. of 10-15  $\mu$ M. The measurement of  
 tHcy requires precise sample collection, immediate separation and freezing of

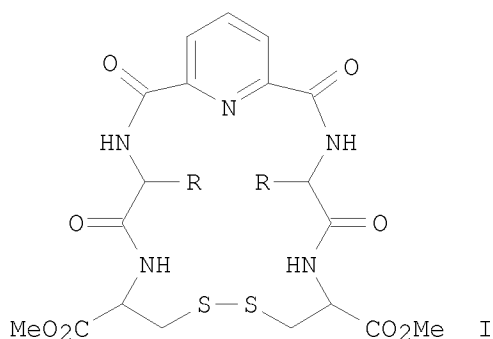
plasma, and referral to a specialized laboratory. The etiologies of hyperhomocysteinemia are complex and involve both genetic and environmental factors. Because the inappropriate supplementation of involved cofactors can be harmful, it is important to identify the cause of hyperhomocysteinemia prior to treatment.

IT 4985-47-1, Homocysteine-cysteine disulfide  
 RL: ANT (Analyte); ANST (Analytical study)  
 (measurement of total plasma homocysteine using capillary GC-MS)  
 RN 4985-47-1 CAPLUS  
 CN Butanoic acid, 2-amino-4-[(2-amino-2-carboxyethyl)dithio]- (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 8 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:778217 CAPLUS  
 DOCUMENT NUMBER: 130:110621  
 TITLE: Synthesis of a new series of cyclic pseudopeptides containing pyridine as backbone modifier  
 AUTHOR(S): Huang, Hai; Mu, Lin-Jing; Cheng, Jin-Pei; Lu, Jian-Ming; Hu, Xu-Bo  
 CORPORATE SOURCE: Department of Chemistry, Nankai University, Tianjin, 300071, Peop. Rep. China  
 SOURCE: Synthetic Communications (1998), 28(24), 4639-4647  
 CODEN: SYNCAV; ISSN: 0039-7911  
 PUBLISHER: Marcel Dekker, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 130:110621  
 GI



AB A new class of cyclic pseudopeptides I (R = H, Me, CH<sub>2</sub>CHMe<sub>2</sub>, etc.) which contains pyridine and cystine in the backbone structure was synthesized by a simple three-step preparation. The structures of products were characterized by spectroscopic and conventional anal. methods.  
 IT 55300-75-9P 98684-05-0P 204383-31-3P  
 219655-51-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

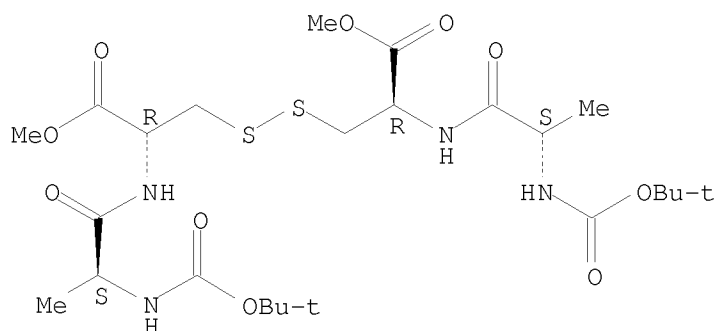
(Reactant or reagent)

(synthesis of cyclic pseudopeptides containing pyridine and disulfide moieties)

RN 55300-75-9 CAPLUS

CN L-Cysteine, N-[(1,1-dimethylethoxy)carbonyl]-L-alanyl-, methyl ester, bimol. (2→2')-disulfide (9CI) (CA INDEX NAME)

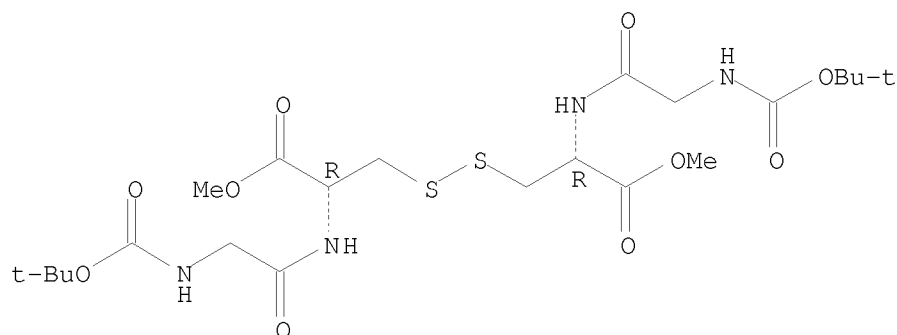
Absolute stereochemistry.



RN 98684-05-0 CAPLUS

CN L-Cysteine, N-[(1,1-dimethylethoxy)carbonyl]glycyl-, methyl ester, bimol. (2→2')-disulfide (9CI) (CA INDEX NAME)

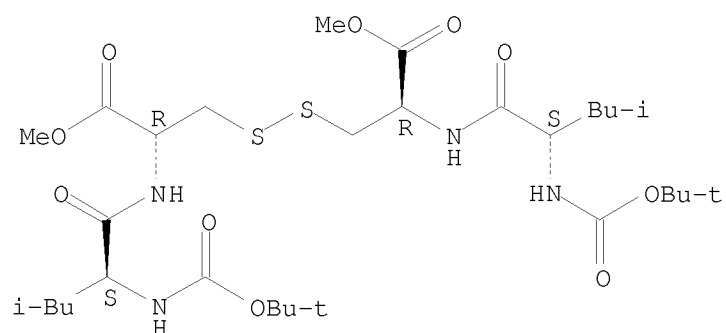
Absolute stereochemistry.



RN 204383-31-3 CAPLUS

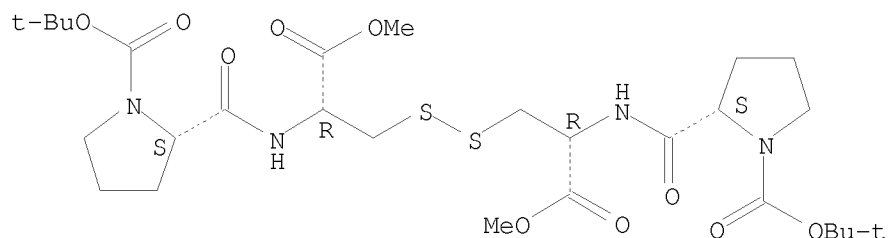
CN L-Cysteine, N-[(1,1-dimethylethoxy)carbonyl]-L-leucyl-, methyl ester, bimol. (2→2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 219655-51-3 CAPLUS  
CN L-Cysteine, 1-[(1,1-dimethylethoxy)carbonyl]-L-prolyl-, methyl ester,  
bimol. (2→2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 9 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:766878 CAPLUS

DOCUMENT NUMBER: 130:152488

TITLE: Synthesis and structure-function study about tenecin 1, an antibacterial protein from larvae of Tenebrio molitor

AUTHOR(S): Lee, Keun Hyeung; Hong, Sung Yu; Oh, Jong Eun  
CORPORATE SOURCE: Protein Chemistry Laboratory, Mogam Biotechnology Research Institute, Yongin-City, Kyunggi-Do, 449-910, S. Korea

SOURCE: FEBS Letters (1998), 439(1,2), 41-45  
CODEN: FEBLAL; ISSN: 0014-5793

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Tenecin 1, an inducible antibacterial protein secreted in the larvae of Tenebrio molitor, has a long N-terminal loop and common structural feature of insect defensin family corresponding to cysteine stabilized  $\alpha/\beta$  motif. To study the function of the N-terminal loop and disulfide bridges, N-terminal loop deleted tenecin 1, reduced tenecin 1 and tenecin 1 were chemical synthesized and their activities were measured. N-terminal loop deleted tenecin and reduced tenecin 1 did not show antibacterial activity. CD spectroscopy data revealed that the  $\alpha$ -helical content of tenecin 1 and the other proteins increased in the presence of 50% (volume/volume) trifluoroethanol (TFE) and the  $\alpha$ -helical content of tenecin 1 was much higher than that of the other proteins in buffer with or without 50% (volume/volume) TFE. These results suggest that disulfide bridges are necessary for the activity structure and the N-terminal loop plays an important role in the increase of  $\alpha$ -helix in the membrane mimetic environment and the activity.

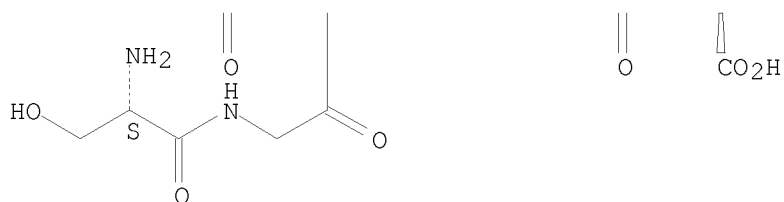
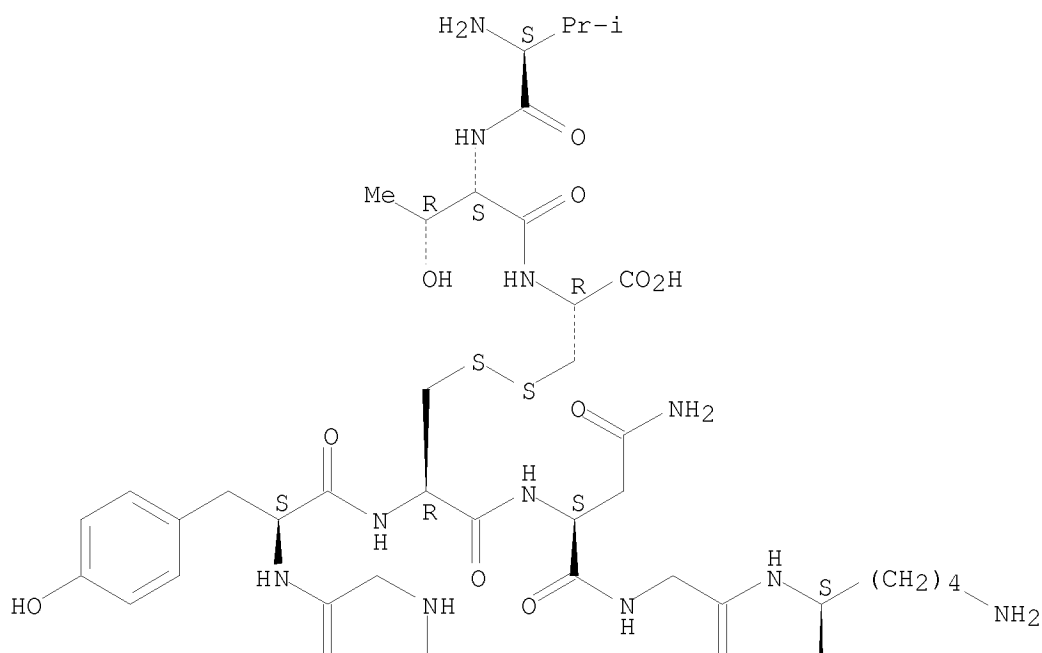
IT 220133-00-6 220133-06-2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(structure-function study of tenecin 1 of Tenebrio molitor)

RN 220133-00-6 CAPLUS

CN L-Lysine, L-serylglycylglycyl-L-tyrosyl-L-cysteinyl-L-asparaginylglycyl-, (5→3')-disulfide with L-valyl-L-threonyl-L-cysteine (9CI) (CA INDEX NAME)

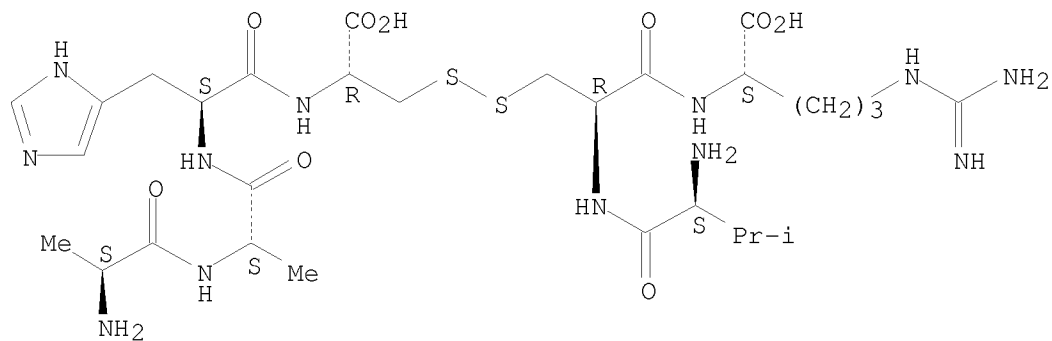
Absolute stereochemistry.



RN 220133-06-2 CAPLUS

CN L-Cysteine, L-alanyl-L-alanyl-L-histidyl-, (4→2')-disulfide with  
L-valyl-L-cysteinyl-L-arginine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1998:736682 CAPLUS  
 DOCUMENT NUMBER: 130:105808  
 TITLE: Optimal lipofection reagent varies with the molecular modifications of the DNA  
 AUTHOR(S): Conrad, Abigail H.; Behlke, Mark A.; Jaffredo, Thierry; Conrad, Gary W.  
 CORPORATE SOURCE: Division of Biology, Kansas State University, Manhattan, KS, 66506-4901, USA  
 SOURCE: Antisense & Nucleic Acid Drug Development (1998), 8(5), 427-434  
 CODEN: ANADF5; ISSN: 1087-2906  
 PUBLISHER: Mary Ann Liebert, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Cationic lipid reagents differ in their cytofection efficacy with different cell types. No evidence has addressed whether the same lipid reagent is best for different DNAs in a single cell line. Immortalized avian embryonic cardiomyocytes cultured in vitro were tested with 15 cationic lipid reagents using (A) a  $\beta$ -gal expression plasmid, (B) a fluorescein-tagged, phosphorothioate-modified ODN B, (C) a fluorescein-tagged, ethoxy-modified ODN C with the same nucleotide sequence as ODN B, and (D) a fluorescein-tagged, phosphorothioate-modified ODN D with a different nucleotide sequence from ODNs B and C. Cytofection was scored as percent of cells expressing  $\beta$ -gal activity or showing diffuse cellular fluorescence. The best lipid reagents for the phosphorothioate-modified ODNs were ODN-specific and markedly different from the best lipid reagents for the expression plasmid or for the ethoxy-modified ODN. These results suggest that the best cationic lipid reagent for a particular cell type varies with the phys. and chemical form of the DNA being transfected into the cells.

IT 212905-67-4  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (optimal lipofection reagent varies with mol. modifications of DNA)

RN 212905-67-4 CAPLUS

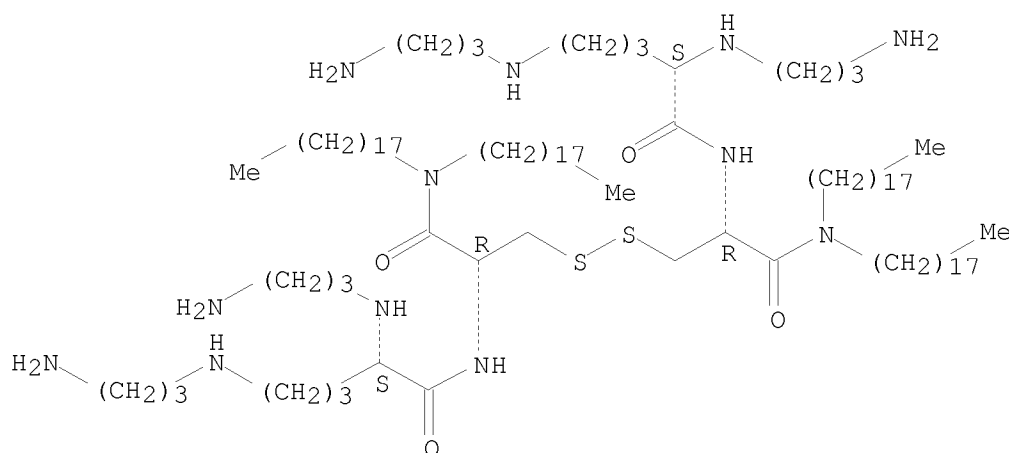
CN L-Cysteinamide, N2,N5-bis(3-aminopropyl)-L-ornithyl-N,N-dioctadecyl-, bimol. (2 $\rightarrow$ 2')-disulfide, octakis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 212905-66-3

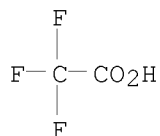
CMF C100 H206 N12 O4 S2

Absolute stereochemistry.



CM 2

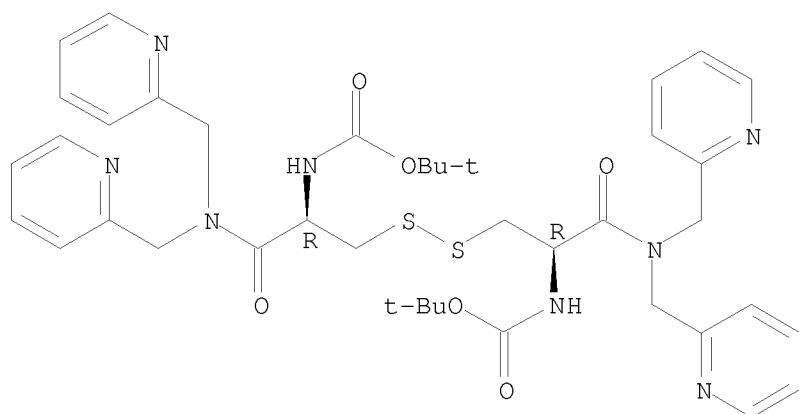
CRN 76-05-1  
CMF C2 H F3 O2



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

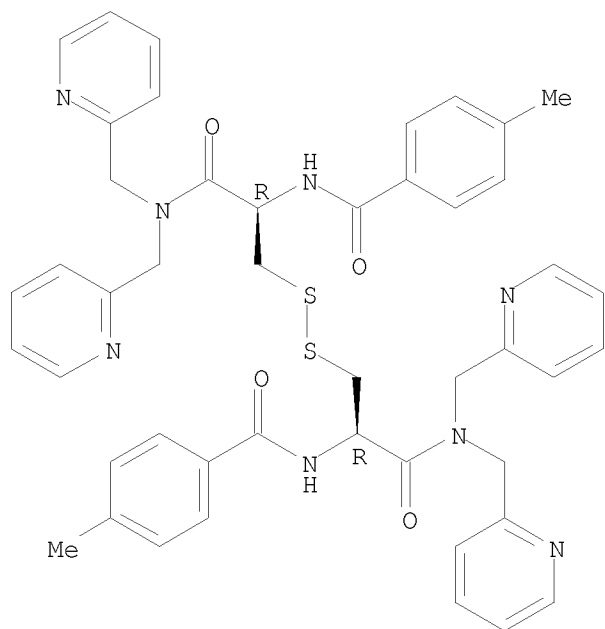
L27 ANSWER 11 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:735810 CAPLUS  
DOCUMENT NUMBER: 130:75350  
TITLE: New tripodal N3S ligands and some zinc complexes thereof  
AUTHOR(S): Burth, Rainer; Stange, Andreas; Schaefer, Markus; Vahrenkamp, Heinrich  
CORPORATE SOURCE: Inst. Anorganische Analytische Chem., Univ. Freiburg, Freiburg/Br., D-79104, Germany  
SOURCE: European Journal of Inorganic Chemistry (1998), (11), 1759-1764  
CODEN: EJICFO; ISSN: 1434-1948  
PUBLISHER: Wiley-VCH Verlag GmbH  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Attachment of 2-pyridylmethyl units to cysteine amide and 2-mercaptobenzylamine leads to the tripodal N3S ligands  $\alpha$ -(4-methylbenzoyl)-L-cysteinylbis(2-pyridylmethyl)amide (HL) and (2-mercaptobenzyl)bis(2-pyridylmethyl)amine (HL1). Their treatment with zinc halides yields the neutral complexes ZnLX and ZnL1X (X = Cl, Br, I). With  $\text{Zn}(\text{ClO}_4)_2$ , HL1 forms the ionic compound  $[\text{ZnL1}]\text{ClO}_4$ , assumed to be a thiolate-bridged dimer. Structure detns. of ZnL1X [P.hivin.1, Z = 4; X = Cl: a 10.378(2), b 13.191(3), c 14.361(3) Å,  $\alpha$  107.84(3),  $\beta$  105.92(3),  $\gamma$  94.52(3)°; X = Br: a 10.361(1), b 13.244(1), c 14.423(1) Å,  $\alpha$  107.92(1),  $\beta$  105.75(1),  $\gamma$  93.95(1)°] confirmed the tripodal nature of the ligand in the trigonal-bipyramidal complexes.  
IT 217961-85-8P 217961-90-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(for preparation of tripodal N3S ligands and its zinc complexes)  
RN 217961-85-8 CAPLUS  
CN 11-Oxa-5,6-dithia-2,9-diazatridecanoic acid, 3,8-bis[[bis(2-pyridinylmethyl)amino]carbonyl]-12,12-dimethyl-10-oxo-, 1,1-dimethylethyl ester, (3R,8R)- (CA INDEX NAME)

Absolute stereochemistry.



RN 217961-90-5 CAPLUS  
 CN Benzamide, N,N'-[dithiobis[(1R)-1-[[bis(2-pyridinylmethyl)amino]carbonyl]-2,1-ethanediyloxy]]bis[4-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 12 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:708089 CAPLUS  
 DOCUMENT NUMBER: 130:114926  
 TITLE: Cellular uptake of an  $\alpha$ -helical amphipathic model peptide with the potential to deliver polar compounds into the cell interior non-endocytically  
 AUTHOR(S): Oehlke, Johannes; Scheller, Anne; Wiesner, Burkhard; Krause, Eberhard; Beyermann, Michael; Klauschenz, Erhard; Melzig, Mathias; Bienert, Michael  
 CORPORATE SOURCE: Institute of Molecular Pharmacology, Berlin, D-10315, Germany  
 SOURCE: Biochimica et Biophysica Acta, Biomembranes (1998), 1414(1-2), 127-139



PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Evidence that multiple, probably non-endocytic mechanisms are involved in the uptake into mammalian cells of the  $\alpha$ -helical amphipathic model peptide FLUOS-KLALKLALKALKAALKLA-NH<sub>2</sub> (I) is presented. Extensive cellular uptake of N-terminally GC-elongated derivs. of I, conjugated by disulfide bridges to differently charged peptides, indicated that I-like model peptides might serve as vectors for intracellular delivery of polar bioactive compds. The mode of the cellular internalization of I comprising energy-, temperature-, pH- and ion-dependent as well as -independent processes suggests analogy to that displayed by small unstructured peptides reported previously (Oehlke et al., Biochim. Biophys. Acta 1330 (1997) 50-60). The uptake behavior of I also showed analogy to that of several protein-derived helical peptide sequences, recently found to be capable of efficiently carrying tagged oligonucleotides and peptides directly into the cytosol of mammalian cells (Derossi et al., J. Biol. Chemical 269 (1994) 10444-10450; Lin et al., J. Biol. Chemical 270 (1995) 14255-14258; Fawell et al., Proc. Natl. Acad. Sci. USA 91 (1994) 664-668; Chaloin et al., Biochem. 36 (1997) 11179-11187; Vives et al., J. Biol. Chemical, 272 (1997) 16010-16017).

IT 219536-84-2

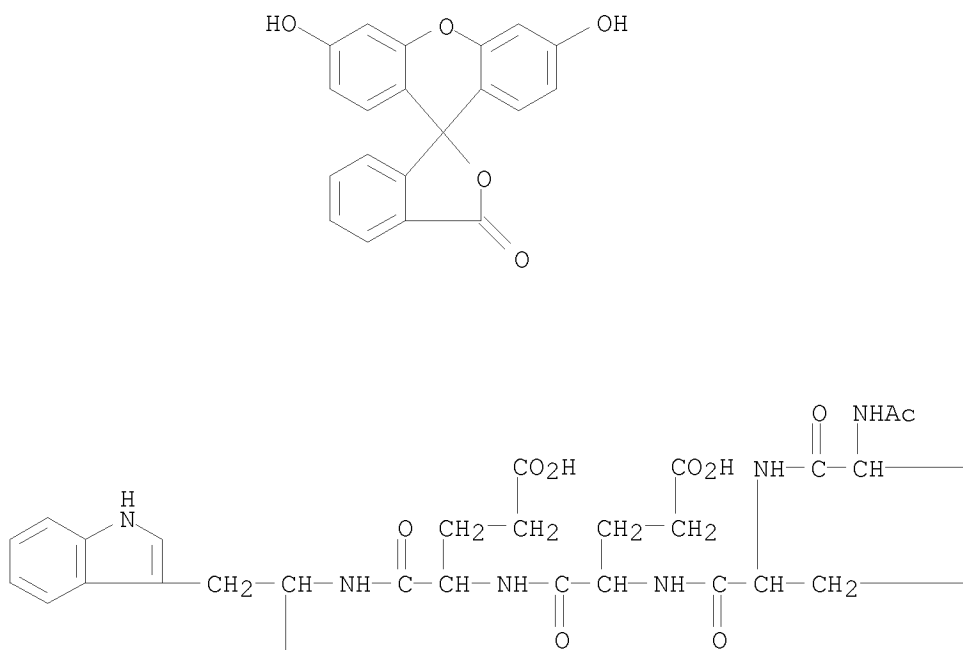
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(cargo peptide transport; cellular uptake of an  $\alpha$ -helical amphipathic model peptide with the potential to deliver polar compds. into the cell interior non-endocytically)

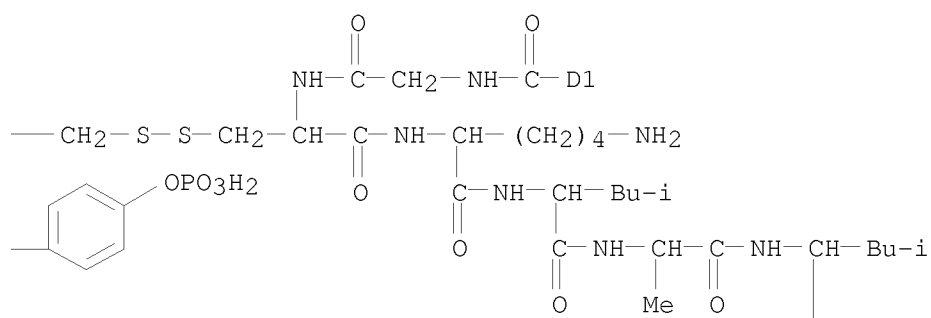
RN 219536-84-2 CAPLUS

CN L-Alaninamide, N-[[3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5(or 6)-yl]carbonyl]glycyl-L-cysteinyl-L-lysyl-L-leucyl-L-alanyl-L-leucyl-L-lysyl-L-leucyl-L-alanyl-L-leucyl-L-lysyl-L-alanyl-L-leucyl-L-lysyl-L-leucyl-, (2 $\rightarrow$ 1')-disulfide with N-acetyl-L-cysteinyl-O-phosphono-L-tyrosyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamyl-L-tryptophyl-L- $\alpha$ -glutamine (9CI)  
(CA INDEX NAME)

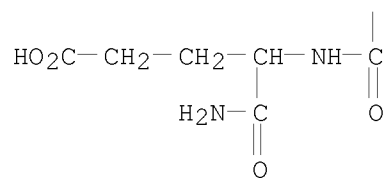
PAGE 1-A



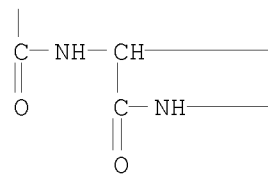
PAGE 1-B

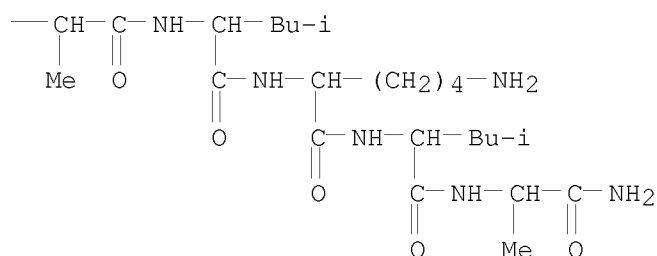
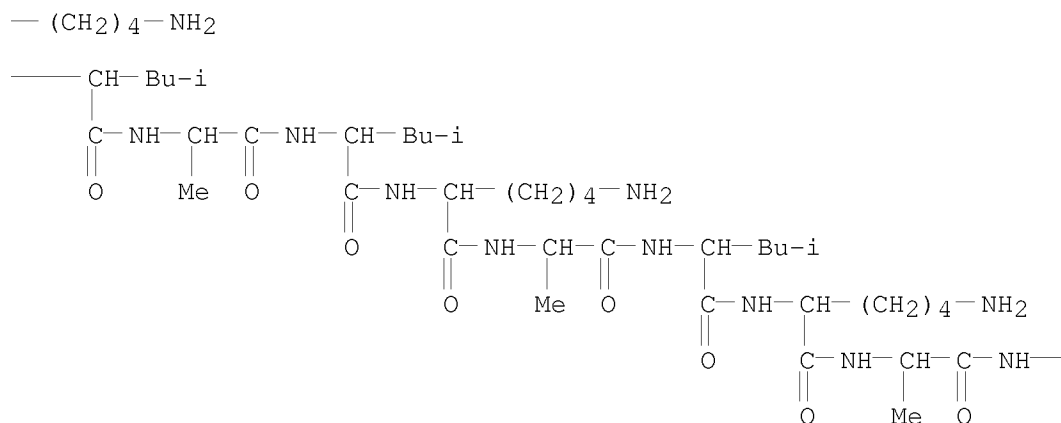


PAGE 2-A



PAGE 2-B





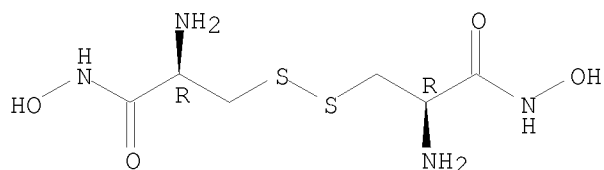
REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 13 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:702364 CAPLUS  
 DOCUMENT NUMBER: 130:17717  
 TITLE: Complexation of Iron(III) by cystinedihydroxamic acid  
 AUTHOR(S): Birus, Mladen; Inic, Suzana; Kujundii, Nikola;  
 Nigovic, Biljana  
 CORPORATE SOURCE: Faculty of Pharmacy and Biochemistry, University of  
 Zagreb, Zagreb, 10000, Croatia  
 SOURCE: Croatica Chemica Acta (1998), 71(3), 807-816  
 CODEN: CCACAA; ISSN: 0011-1643  
 PUBLISHER: Croatian Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB In acidic and neutral solns., cystinedihydroxamic acid (H<sub>2</sub>L<sub>2</sub><sup>+</sup>) binds

ferric ion forming monomeric and dimeric complexes of 1:1, 2:2 and 2:3 metal to ligand stoichiometry. Comparison of the obtained equilibrium and spectral data for mono(cystinedihydroxamato)iron(III) with those of other hydroxamatoiron(III) complexes suggests the same mode of coordination. The Fe2L3 complex has been isolated and characterized by elemental anal. and IR spectra.

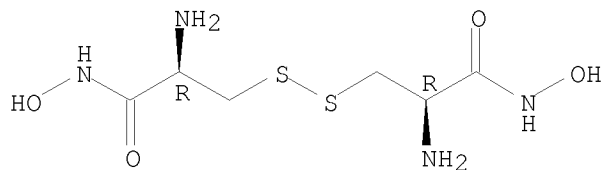
IT 102601-57-0  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (complexation of iron(III) by cystinedihydroxamic acid)  
 RN 102601-57-0 CAPLUS  
 CN Propanamide, 3,3'-dithiobis[2-amino-N-hydroxy-, (2R,2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 102601-57-0D, iron complexes  
 RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); FORM (Formation, nonpreparative); PROC (Process)  
 (formation constant; complexation of iron(III) by cystinedihydroxamic acid)  
 RN 102601-57-0 CAPLUS  
 CN Propanamide, 3,3'-dithiobis[2-amino-N-hydroxy-, (2R,2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

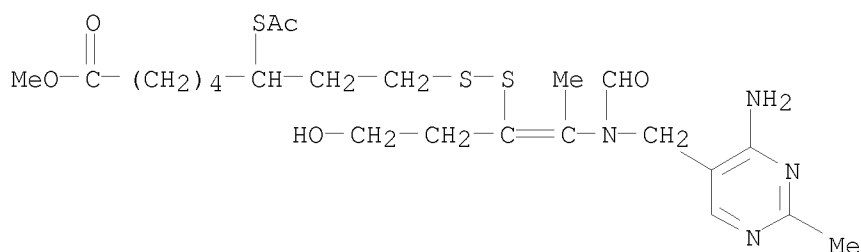


REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 14 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:693383 CAPLUS  
 DOCUMENT NUMBER: 130:17262  
 TITLE: Improvement of taste of oral amino acid solutions with thiamines and taste-improved amino acid solutions  
 INVENTOR(S): Sasaki, Yuichi; Misumi, Yoshiaki  
 PATENT ASSIGNEE(S): Taisho Pharmaceutical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

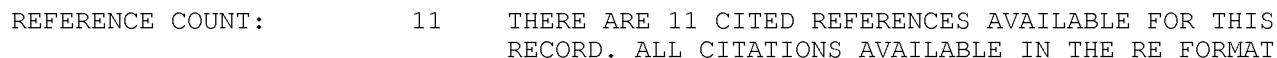
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10287551 A 19981027 JP 1997-93293 19970411  
 PRIORITY APPLN. INFO.: JP 1997-93293 19970411  
 AB Unpleasant taste of oral amino acid solns. are masked by adding thiamines having unpleasant aftertaste. A solution was prepared from 100 mg methionine, 1 mg fursultiamine, 250 mg citric acid, and H2O to 50 mL.  
 IT 137-86-0, Octotiamine  
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (improvement of taste of oral amino acid solns. with thiamines)  
 RN 137-86-0 CAPLUS  
 CN Octanoic acid, 6-(acetylthio)-8-[[2-[[[4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]-1-(2-hydroxyethyl)-1-propen-1-yl]dithio]-, methyl ester (CA INDEX NAME)



L27 ANSWER 15 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:682990 CAPLUS  
 DOCUMENT NUMBER: 130:81741  
 TITLE: Synthesis of Des-myo-Inositol Mycothiol and Demonstration of a Mycobacterial Specific Reductase Activity  
 AUTHOR(S): Patel, Mehul P.; Blanchard, John S.  
 CORPORATE SOURCE: Department of Biochemistry, Albert Einstein College of Medicine, Bronx, NY, 10461, USA  
 SOURCE: Journal of the American Chemical Society (1998), 120(44), 11538-11539  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 130:81741  
 AB The kinetics and mechanistic characterization of the M. tuberculosis mycothione reductase is studied using substrate N-acetyl-L-cysteinyl-2-amino-2-deoxy-D-glucopyranoside disulfide, which was prepared via coupling of  $\alpha$ -D-glucosamine hydrochloride with N- $\alpha$ -Fmoc-S-acetamidomethyl-L-cysteine-pentafluorophenyl ester.  
 IT 218604-32-1P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (synthesis of des-myo-inositol mycothiol and demonstration of a mycobacterial specific reductase activity)  
 RN 218604-32-1 CAPLUS  
 CN D-Glucose, 2,2'-[dithiobis[[[(2R)-2-(acetylamino)-1-oxo-3,1-propanediyl]imino]]bis[2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



AB Two series of amphiphilic two- $\alpha$ -helix peptides that bind FeIII-mesoporphyrin (haem) through a ligation of two His residues were designed and synthesized. The interaction between the peptides and the haem was characterized by UV-VIS and CD measurements. The first series of peptides, designed on the basis of the coiled-coil motif, showed a unique haem binding property which was dependent on the concentration of trifluoroethanol (TFE) present. The peptides bound the haem effectively only when the two- $\alpha$ -helix structures were controlled by the addition of 10-25% TFE. These results indicated that the haem binding ability of the peptides could be regulated by the change in peptide conformation with TFE. The second series of two- $\alpha$ -helix peptides, designed on the basis of the amphiphilic  $\alpha$ -helix motif, but not of the coiled-coil motif, formed an  $\alpha$ -helix structure and bound the haem in a buffer. Furthermore, in the presence of peptides, the haem showed strong induced CD peaks at the Soret region, implying that the haem chromophore was highly oriented in the peptide structures. The catalytic activity of the haem bound to the peptides, which was similar to that of peroxidase, was significantly depressed with increased binding consts. and the Soret-CD intensities. It was demonstrated that the catalytic activity of the haem was correlated with the rigidity and orientation of the b-type haem in the polypeptides.

RN	189377-38-6	CAPLUS
CN	L-Cysteinamide, N-acetyl-L-alanyl-L-leucyl-L- $\alpha$ -glutamyl-L-glutaminyl-L-lysyl-L-histidyl-L-alanyl-L-alanyl-L-leucyl-L- $\alpha$ -glutamyl-L-glutaminyl-L-lysyl-L-leucyl-L-alanyl-L-alanyl-, bimol. (16 $\rightarrow$ 16')-disulfide (9CI) (CA INDEX NAME)	

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 17 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:648288 CAPLUS  
DOCUMENT NUMBER: 129:343786  
ORIGINAL REFERENCE NO.: 129:70031a  
TITLE: Synthesis of thioester end-functionalized poly(.vepsiln.-caprolactone) and its application in chemoselective ligation  
AUTHOR(S): Ni, Qiang; Yu, Luping  
CORPORATE SOURCE: Department of Chemistry and The James Franck Institute, The University of Chicago, Chicago, IL, 60637, USA  
SOURCE: ACS Symposium Series (1998), 709(Tailored Polymeric Materials for Controlled Delivery Systems), 92-104  
CODEN: ACSMC8; ISSN: 0097-6156  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

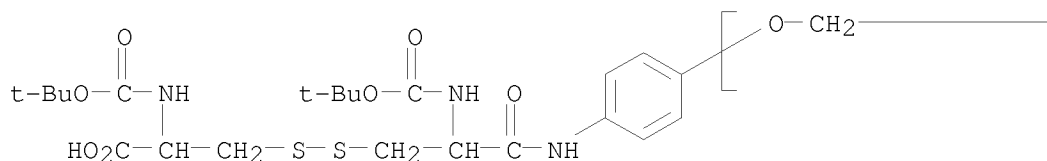
AB In order to synthesize novel poly(.vepsiln.-caprolactone) (PCL) conjugates, thioester functionalized PCL has been synthesized by using dimethylaluminum benzylthiolate as an initiator. The living character and quant. introduction of thioester end in this ring opening polymerization (ROP) process have been confirmed by GPC and <sup>1</sup>H NMR characterization. Furthermore, the applicability of chemoselective ligation to the thioester end has been demonstrated with compds. containing a cysteine terminal.

IT 215582-69-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and hydrolysis of)

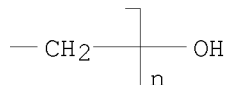
RN 215582-69-7 CAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -[4-[[[(2S)-3-[[[(2S)-2-carboxy-2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]dithio]-2-[[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxopropyl]amino]phenyl]]- $\omega$ -hydroxy-(9CI) (CA INDEX NAME)

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REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 18 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:645543 CAPLUS  
DOCUMENT NUMBER: 130:1664  
TITLE: Kinetic analysis of the mechanism and specificity of

protein-disulfide isomerase using fluorescence-quenched peptides

AUTHOR(S): Westphal, Vibeke; Spetzler, Jane C.; Meldal, Morten; Christensen, Ulla; Winther, Jakob R.

CORPORATE SOURCE: Carlsberg Laboratory, Departments of Yeast Genetics, Copenhagen, DK-2500, Den.

SOURCE: Journal of Biological Chemistry (1998), 273(39), 24992-24999

CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Protein-disulfide isomerase (PDI) is an abundant folding catalyst in the endoplasmic reticulum of eukaryotic cells. PDI introduces disulfide bonds into newly synthesized proteins and catalyzes disulfide bond isomerizations. We have synthesized a library of disulfide-linked fluorescence-quenched peptides, individually linked to resin beads, for two purposes: 1) to probe PDI specificity, and 2) to identify simple, sensitive peptide substrates of PDI. Using this library, beads that became rapidly fluorescent by reduction by human PDI were selected. Amino acid sequencing of the bead-linked peptides revealed substantial similarities. Several of the peptides were synthesized in solution, and a quant. characterization of pre-steady state kinetics was carried out. Interestingly, a greater than 10-fold difference in affinity toward PDI was seen for various substrates of identical length. As opposed to conventional PDI assays involving larger polypeptides, the starting material for this assay is homogeneous. It is furthermore simple and highly sensitive (requires less than 0.5 µg of PDI/assay) and thus opens the possibility for quant. determination of PDI activity and specificity.

IT 215872-75-6 215872-76-7 215872-77-8  
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 215872-81-4 215872-82-5 215872-83-6  
 215872-84-7 215872-85-8

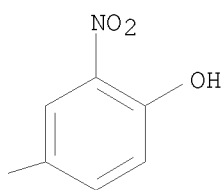
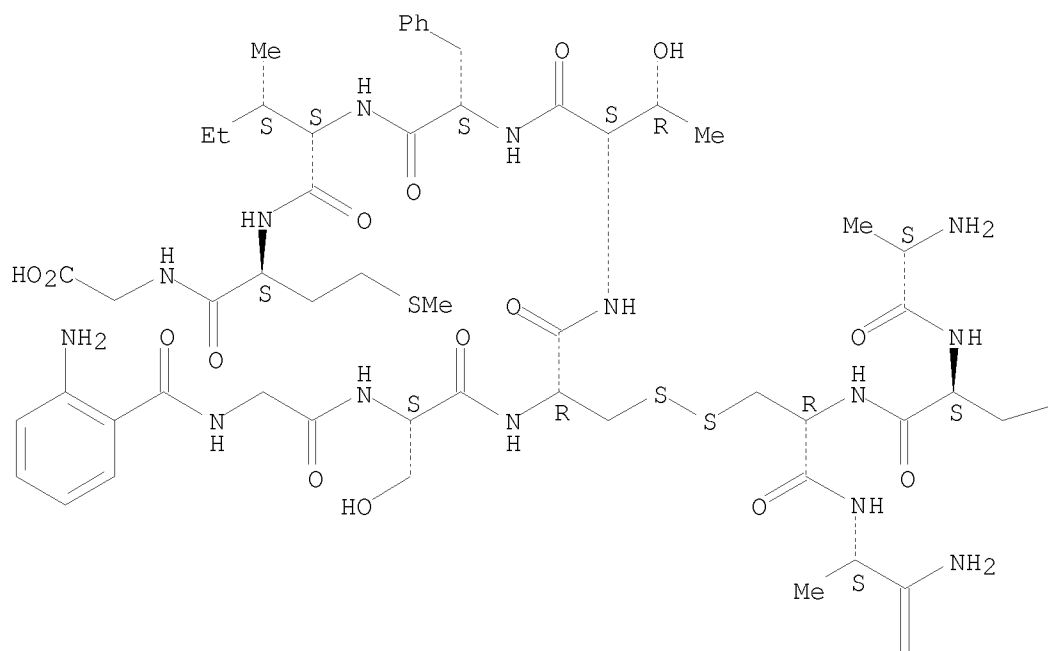
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)  
 (kinetic anal. of the mechanism and specificity of protein-disulfide isomerase using fluorescence-quenched peptides)

RN 215872-75-6 CAPLUS

CN Glycine, N-(2-aminobenzoyl)glycyl-L-seryl-L-cysteinyl-L-threonyl-L-phenylalanyl-L-isoleucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

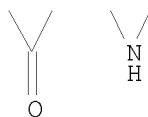
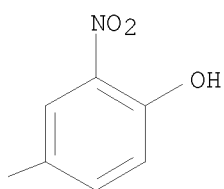
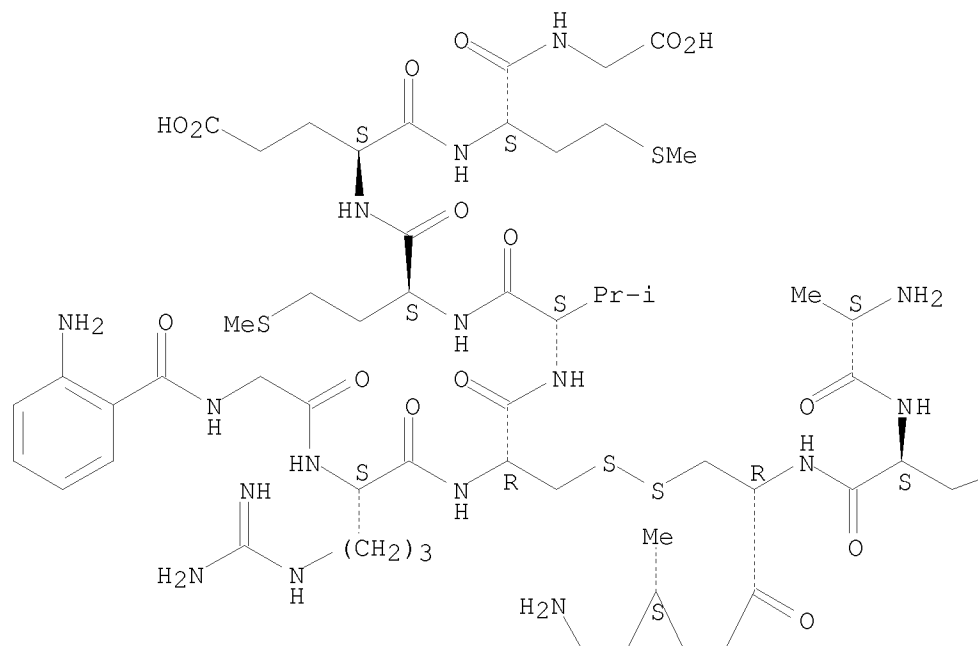
Absolute stereochemistry.





RN 215872-76-7 CAPLUS  
 CN Glycine, N-(2-aminobenzoyl)glycyl-L-arginyl-L-cysteinyl-L-valyl-L-methionyl-L- $\alpha$ -glutamyl-L-methionyl-, (3 $\rightarrow$ 3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

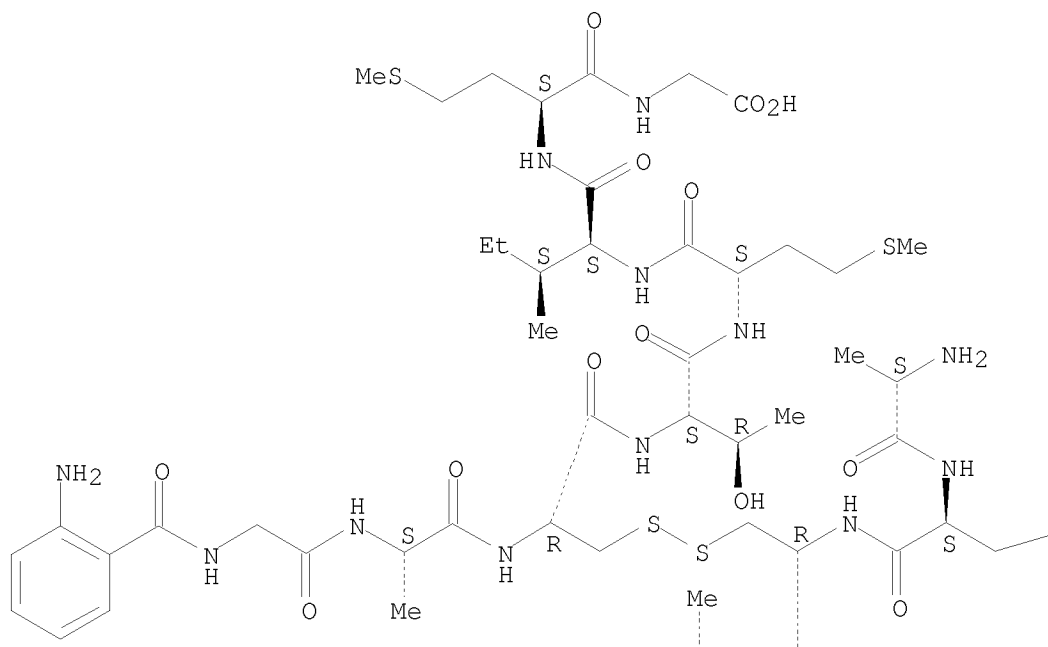
Absolute stereochemistry.



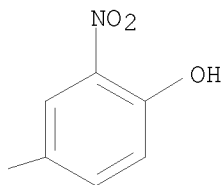
RN 215872-77-8 CAPLUS  
 CN Glycine, N-(2-aminobenzoyl)glycyl-L-alanyl-L-cysteinyl-L-threonyl-L-methionyl-L-isoleucyl-L-methionyl-, (3->3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

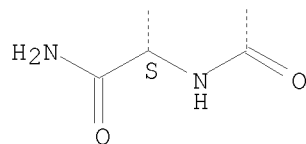
PAGE 1-A



PAGE 1-B



PAGE 2-A

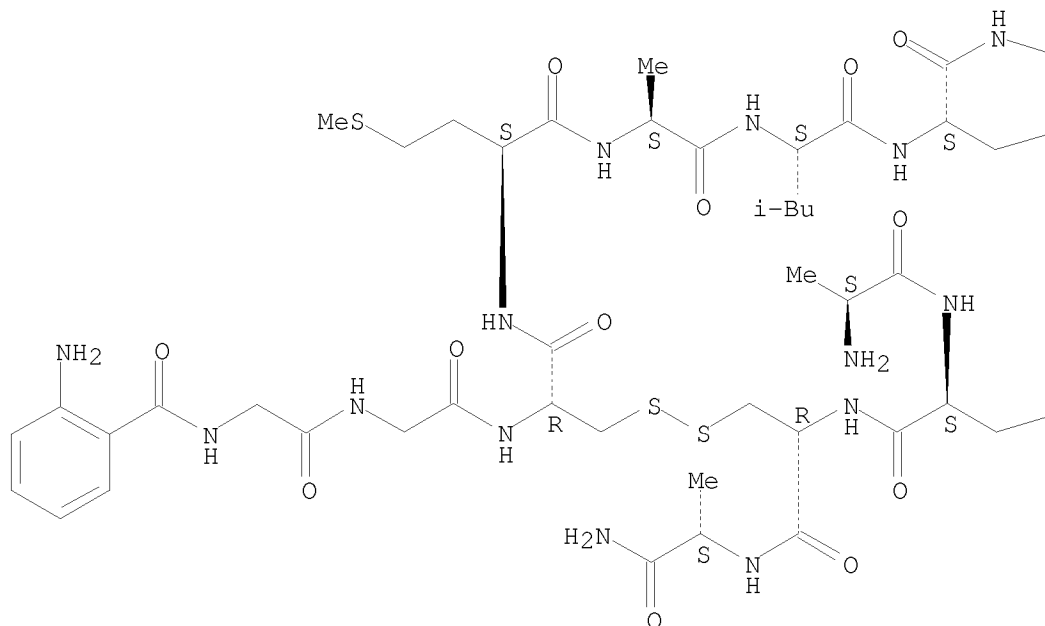


RN 215872-78-9 CAPLUS

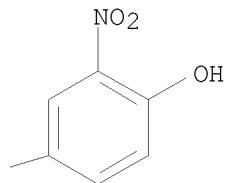
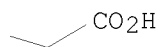
CN Glycine, N-(2-aminobenzoyl)glycylglycyl-L-cysteinyl-L-methionyl-L-alanyl-L-leucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



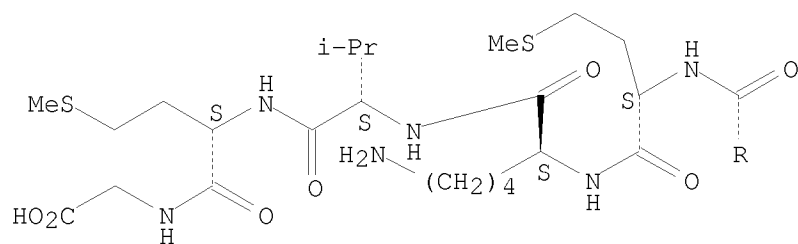
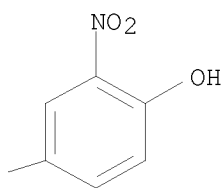
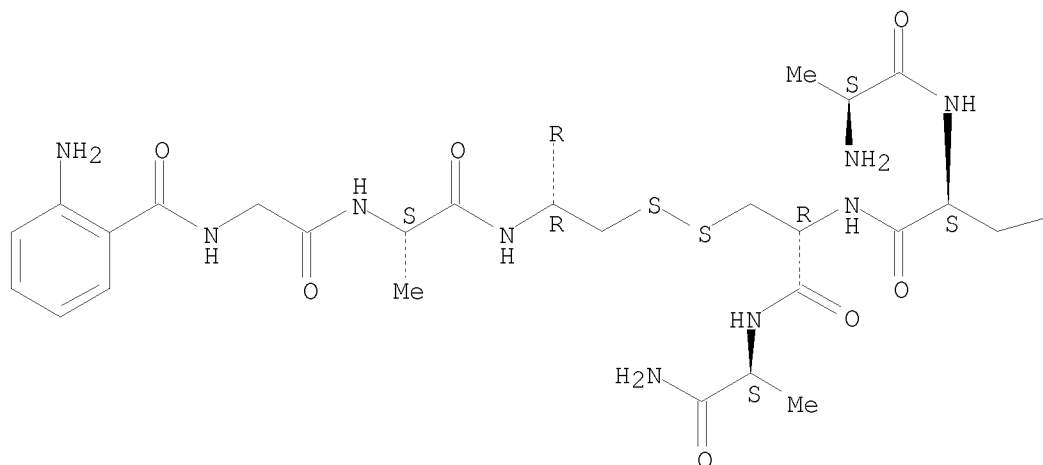
PAGE 1-B



RN 215872-79-0 CAPLUS

CN Glycine, N-(2-aminobenzoyl)glycyl-L-alanyl-L-cysteinyl-L-methionyl-L-lysyl-L-valyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

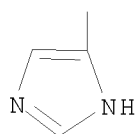
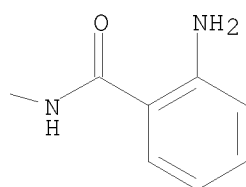
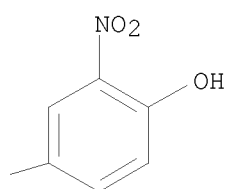
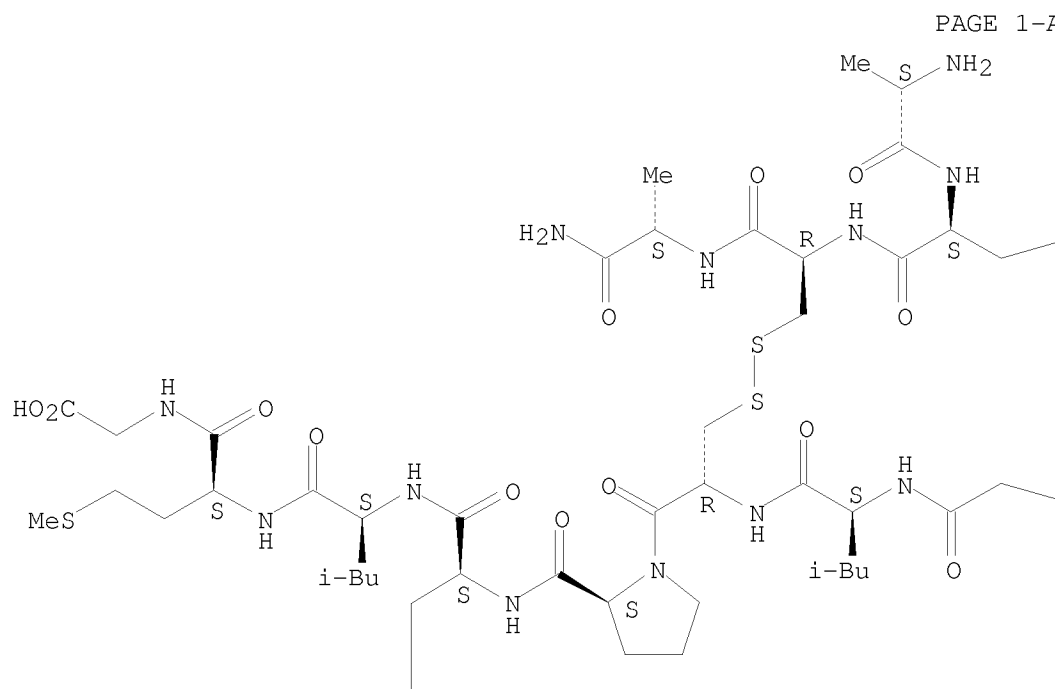
Absolute stereochemistry.



RN 215872-80-3 CAPLUS

CN Glycine, N-(2-aminobenzoyl)glycyl-L-leucyl-L-cysteinyl-L-prolyl-L-histidyl-L-leucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

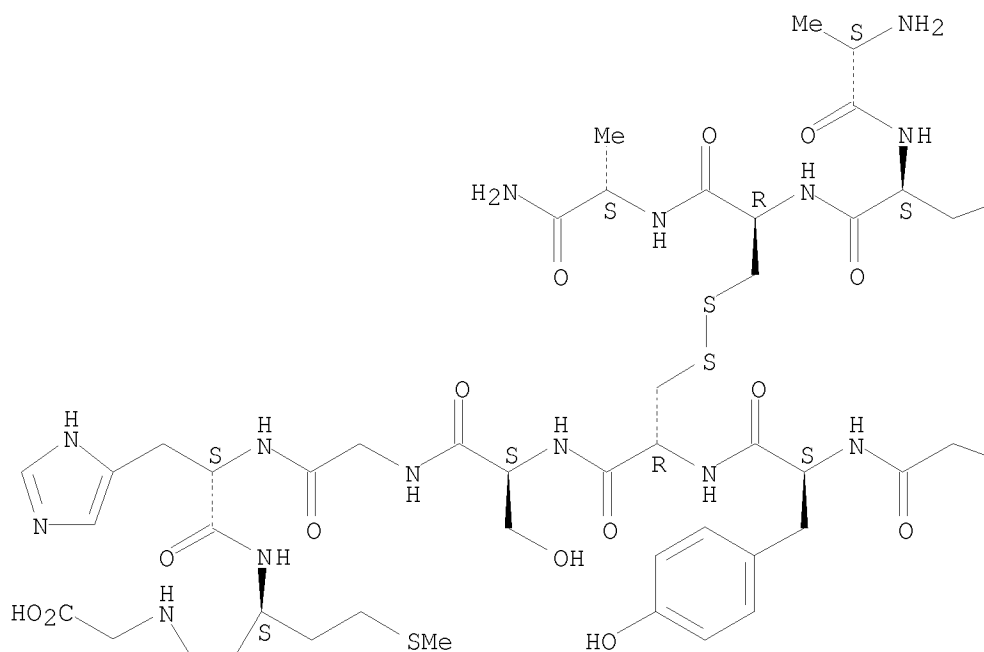


RN 215872-81-4 CAPLUS  
 CN Glycine, N-(2-aminobenzoyl)glycyl-L-tyrosyl-L-cysteinyl-L-serylglycyl-L-

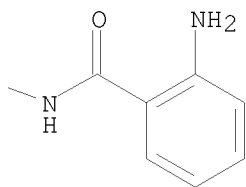
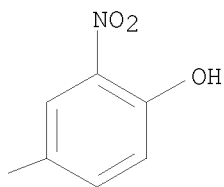
histidyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

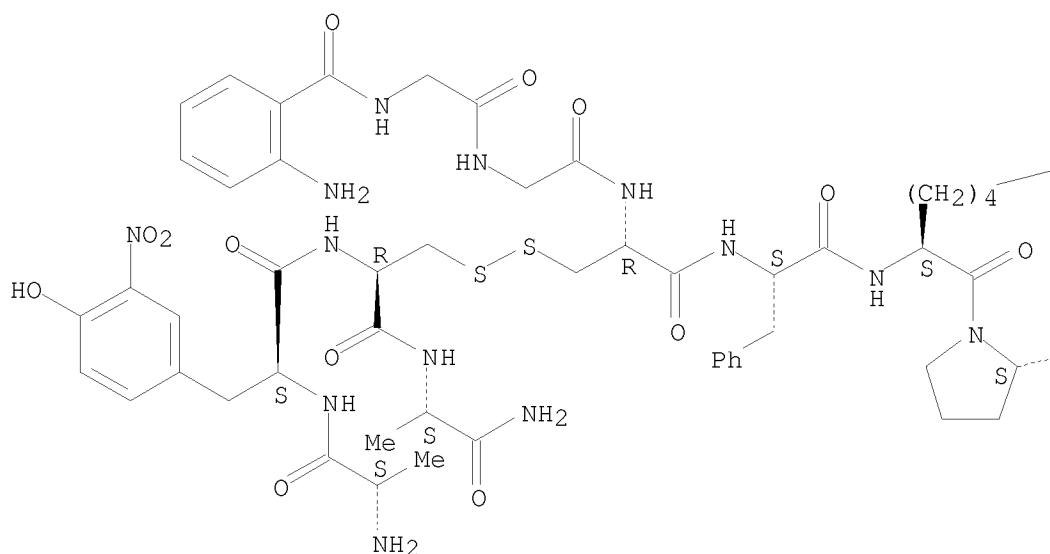


PAGE 2-A

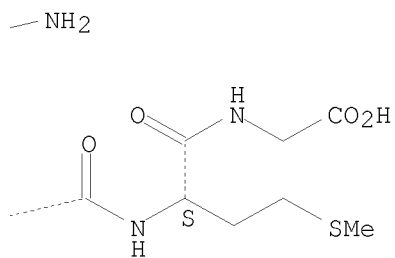


CN	Glycine, N-(2-aminobenzoyl)glycylglycyl-L-cysteinyl-L-phenylalanyl-L-lysyl-L-prolyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)
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PAGE 1-A



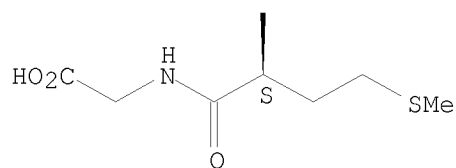
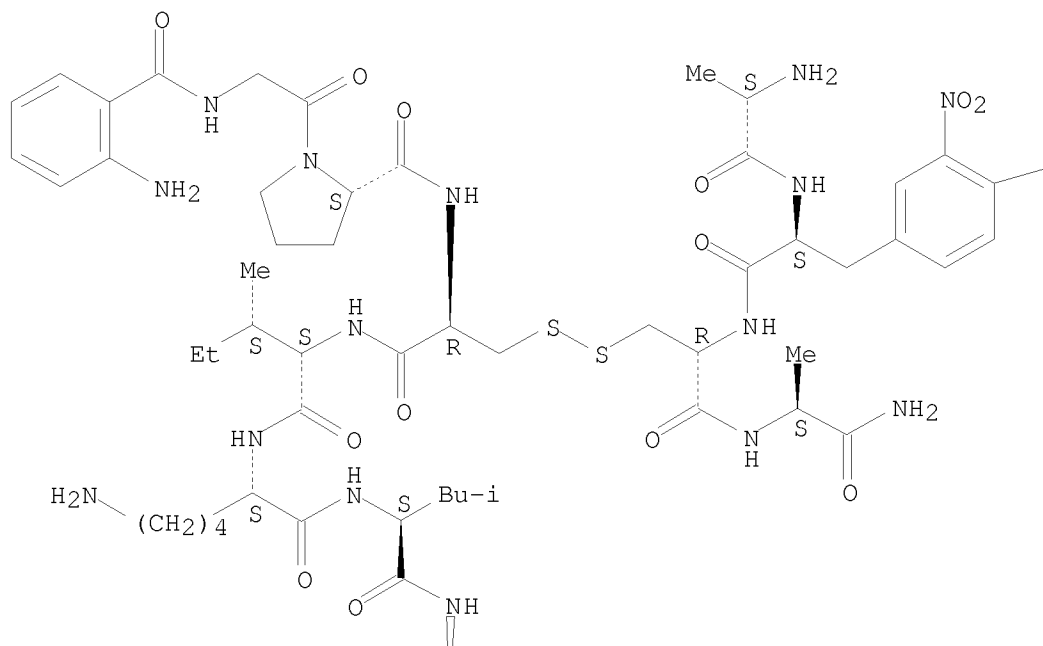
PAGE 1-B



CN Glycine, N-(2-aminobenzoyl)glycyl-L-prolyl-L-cysteinyl-L-isoleucyl-L-lysyl-L-leucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



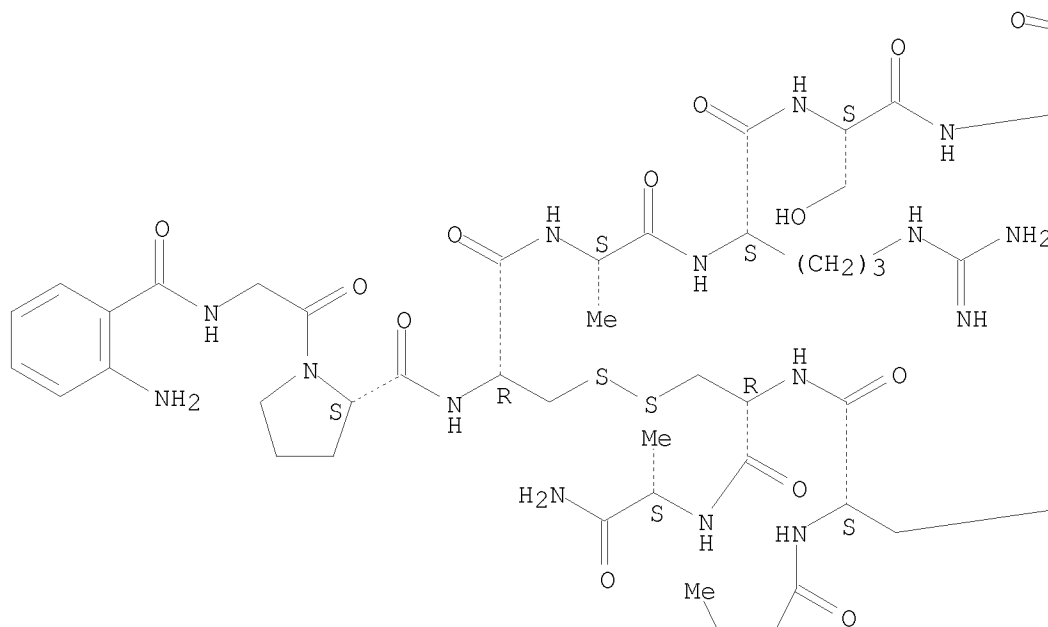


RN 215872-84-7 CAPLUS

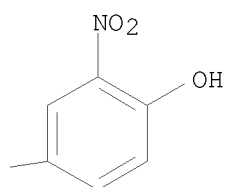
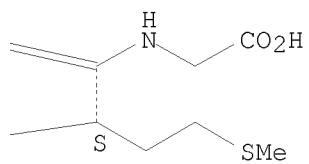
Glycyl-, N-(2-aminobenzoyl)glycyl-L-prolyl-L-cysteinyl-L-alanyl-L-arginyl-L-seryl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B



PAGE 2-A

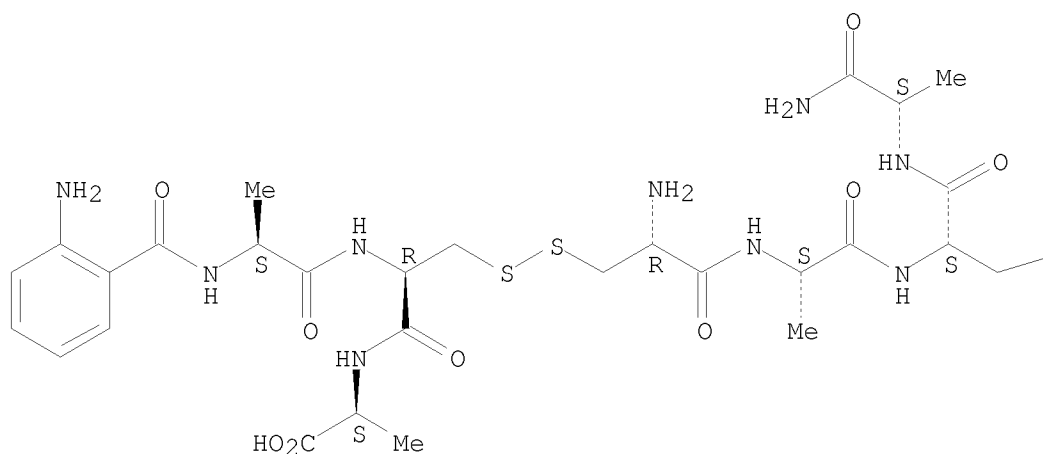


RN 215872-85-8 CAPLUS  
 CN L-Alaninamide, L-cysteinyl-L-alanyl-3-nitro-L-tyrosyl-,

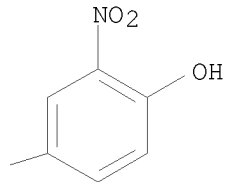
(1→2')-disulfide with N-(2-aminobenzoyl)-L-alanyl-L-cysteinyl-L-alanine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 19 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:641385 CAPLUS  
DOCUMENT NUMBER: 130:33229  
TITLE: AVP(4-8) may stimulate a G protein-coupled receptor in rat hippocampal synaptosomal membranes  
AUTHOR(S): Yan, Qing-Wu; Du, Yu-Cang  
CORPORATE SOURCE: Shanghai Inst. Biochem., Chinese Acad. Sci., Shanghai, 200031, Peop. Rep. China  
SOURCE: Shengwu Huaxue Yu Shengwu Wuli Xuebao (1998), 30(5), 505-509  
CODEN: SHWPAU; ISSN: 0582-9879  
PUBLISHER: Shanghai Kexue Jishu Chubanshe  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese

AB As a metabolite of arginine-vasopressin, AVP(4-8) has been shown to have potent memory-enhancing activity and to induce a series of physiol. and biochem. events in rat brain. GTP-binding protein is known to be a revolving stage of transmembrane signal transduction to mediate physiochem. responses of neurotransmitters and neuromodulators. A specific binding site of AVP(4-8) in the rat hippocampal synaptic

membranes was identified by radioreceptor assay and after binding to membranes, AVP(4-8) enhanced the binding of guanosine -5'-O-(3-[35S]thio)triphosphate ([35S]GTP $\gamma$ S), and this enhancement could be completely reversed by the antagonist of AVP(4-8), ZNC(C)PR. Based on these results, the authors suggest that AVP(4-8) exerts its function as neurotransmitter through a G-protein-coupled receptor on the synaptosomal membrane of rat hippocampus.

IT 87558-80-3

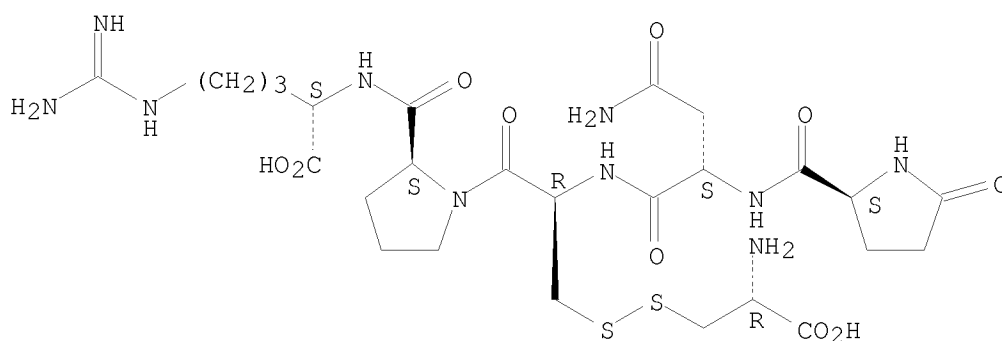
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(vasopressin metabolite stimulation of G protein-coupled receptor in hippocampal synaptosomal membranes)

RN 87558-80-3 CAPLUS

CN L-Arginine, 5-oxo-L-prolyl-L-asparaginyl-L-cysteinyl-L-prolyl-, disulfide with L-cysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L27 ANSWER 20 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:618095 CAPLUS

DOCUMENT NUMBER: 129:310982

ORIGINAL REFERENCE NO.: 129:63321a,63324a

TITLE: Short-term insulin-induced glycogen formation in primary hepatocytes as a screening bioassay for insulin action

AUTHOR(S): Vu, Lan; Pralong, William F.; Cerini, Fabrice; Gjinovci, Asllan; Stocklin, Reto; Rose, Keith; Offord, Robin E.; Kippen, Alistair D.

CORPORATE SOURCE: Department of Medical Biochemistry, University Medical Centre, Geneva, 1211/4, Switz.

SOURCE: Analytical Biochemistry (1998), 262(1), 17-22

CODEN: ANBCA2; ISSN: 0003-2697

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors describe a novel bioassay to measure specific insulin-like activity in primary cultures of rat hepatocytes by determination of [3H]glycogen

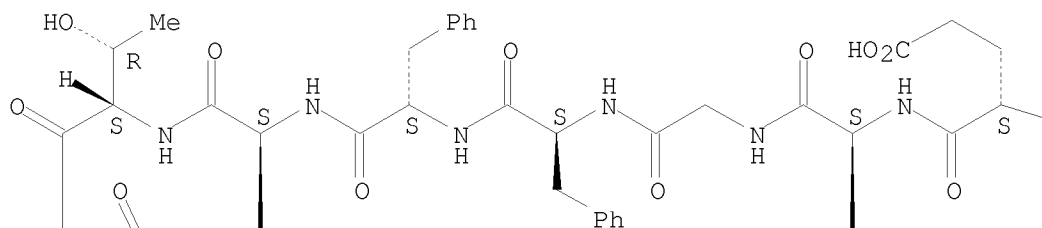
from D-[6-3H]glucose. The dose-response curve of insulin in this assay exhibited an EC50 of 0.42 ( $\pm$  0.04) nM, which is comparable to the dissociation constant of insulin from its receptor in hepatocytes. The authors used this assay to examine possible residual insulin-like activity of the four major fragments formed upon insulin degradation by insulin protease. Fragments A1-13B1-19, A1-14B1-9, and A14-21B14-30 showed no measurable activity. Although preps. of fragment A14-21B10-30 displayed dose-dependent agonist activity with an EC50 of 380 ( $\pm$  40) nM, the authors conclude that this was due to an insulin-like impurity since the chemical synthesized fragment showed no such activity. In summary, this

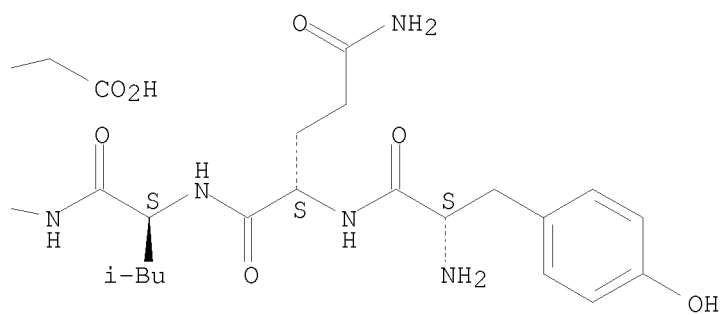
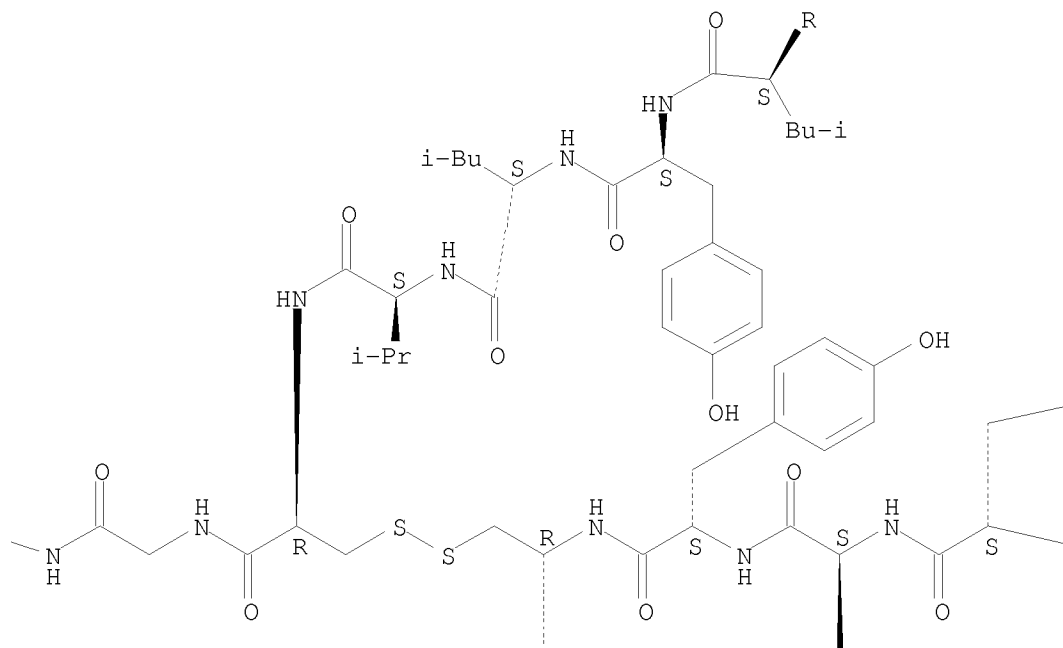
IT 124210-73-7 124210-77-1

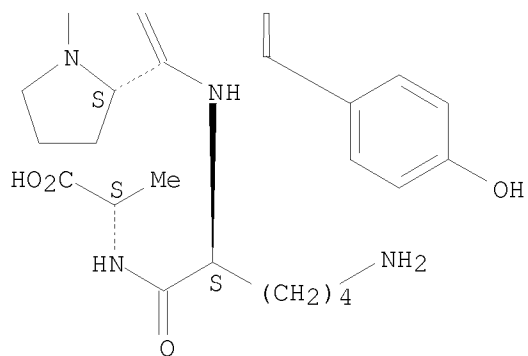
(short-term insulin-induced glycogen formation in primary hepatocytes as screening bioassay for insulin action)

CN 14-30-Insulin (cattle-B reduced), (19→7')-disulfide with  
L-tyrosyl-L-glutaminyl-L-leucyl-L- $\alpha$ -glutamyl-L-asparaginyl-L-tyrosyl-  
L-cysteinyl-L-asparagine (9CI) (CA INDEX NAME)

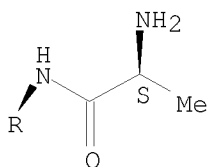
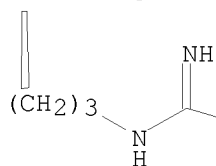
PAGE 1-A



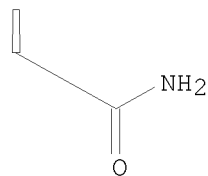
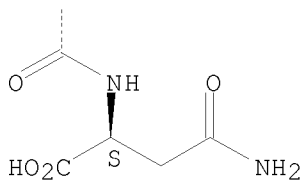
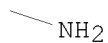




PAGE 2-A



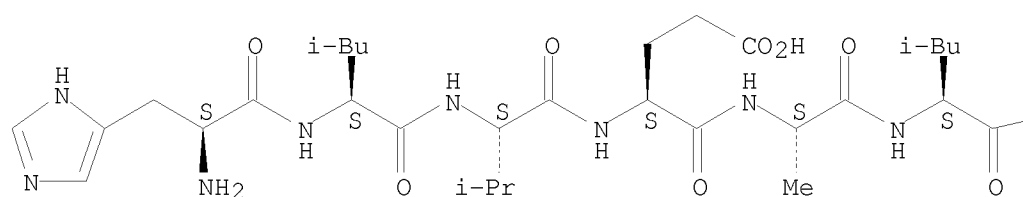
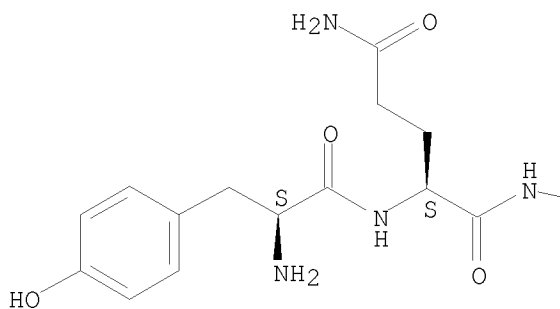
PAGE 2-B

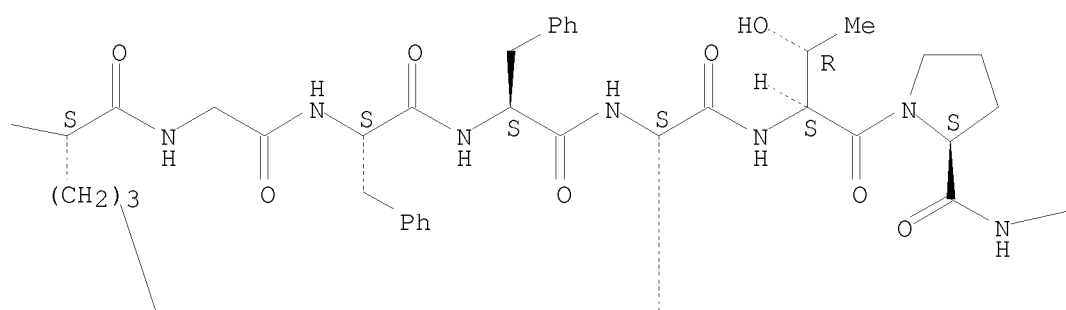
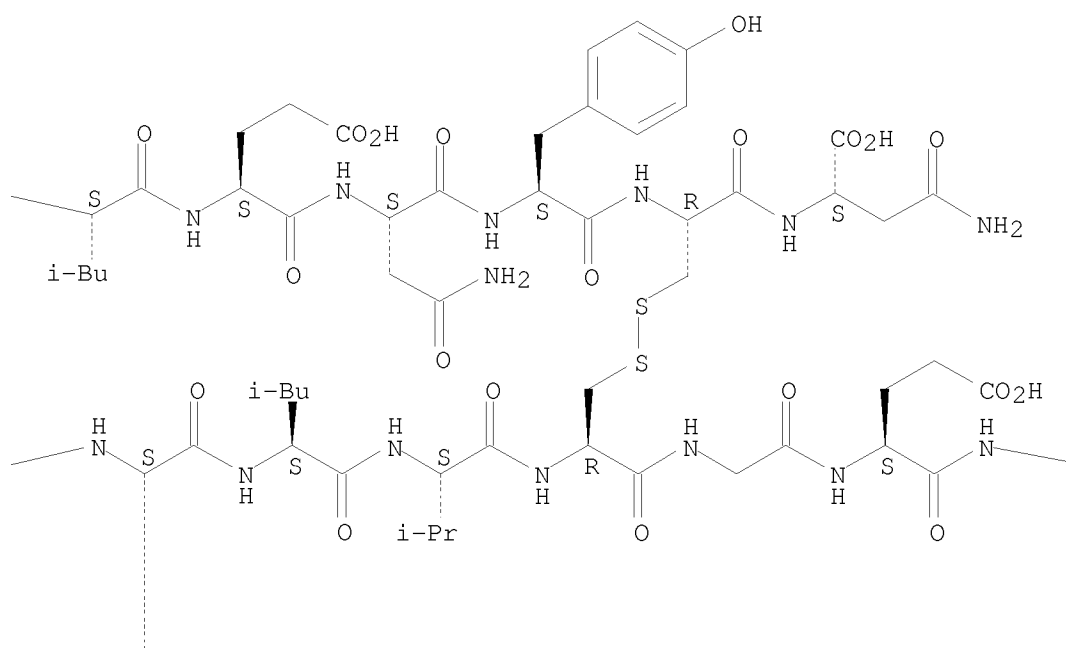


RN 124210-77-1 CAPLUS  
 CN 10-30-Insulin (cattle-B reduced), (19→7')-disulfide with  
 L-tyrosyl-L-glutaminyl-L-leucyl-L-α-glutamyl-L-asparaginyl-L-tyrosyl-  
 L-cysteinyl-L-asparagine (9CI) (CA INDEX NAME)

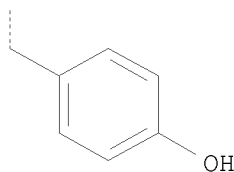
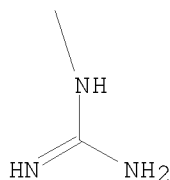
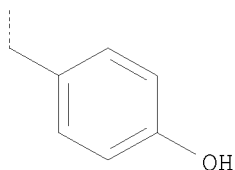
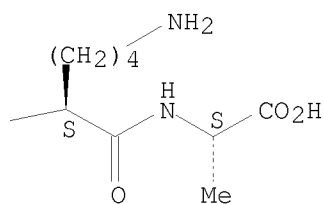
Absolute stereochemistry.

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REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 21 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:611269 CAPLUS  
 DOCUMENT NUMBER: 130:416  
 TITLE: Antinociception produced by the peptidase inhibitor RB 101 in rats with adrenal medullary transplant into the spinal cord  
 AUTHOR(S): Ortega-Alvaro, Antonio; Chover-Gonzalez, Antonio J.; Lai-Kuen, Rene; Mico, Juan A.; Gibert-Rahola, Juan; Fournie-Zaluski, Marie-Claude; Roques, Bernard P.; Maldonado, Rafael  
 CORPORATE SOURCE: UFR des Sciences Pharmaceutiques et Biologiques 4, URA D1500 CNRS, Departement de Pharmacochimie Moleculaire

SOURCE: et Structurale, U266 INSERM, Paris, 75270, Fr.  
European Journal of Pharmacology (1998), 356(2/3),  
139-148  
CODEN: EJPHAZ; ISSN: 0014-2999  
PUBLISHER: Elsevier Science B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB This study was undertaken to investigate the effects induced by the systemic administration of RB 101, a mixed inhibitor of enkephalin catabolism able to cross the blood-brain barrier, on the antinociception produced by transplantation of adrenal medullary tissue into the rat spinal subarachnoid space. The antinociceptive responses induced by i.v. administration of RB 101 were evaluated in the tail-flick in rats which had received transplants 28 and 56 days before the test. Systemic administration of RB 101 induced antinociceptive effects in sham-operated rats, as previously reported. RB 101 also enhanced the antinociception produced by the autotransplant. The antinociceptive responses of RB 101 in both sham-operated and autotransplanted rats were blocked by naloxone, but were not modified by the noradrenergic antagonist, phentolamine, suggesting a selective involvement of opioid mechanisms. The results indicate that inhibitors of enkephalin catabolism enhance the antinociception induced by adrenal medullary transplants.

IT 203498-62-8, RB 101

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(analgesia from adrenal medulla transplant into spinal cord enhancement by)

RN 203498-62-8 CAPLUS

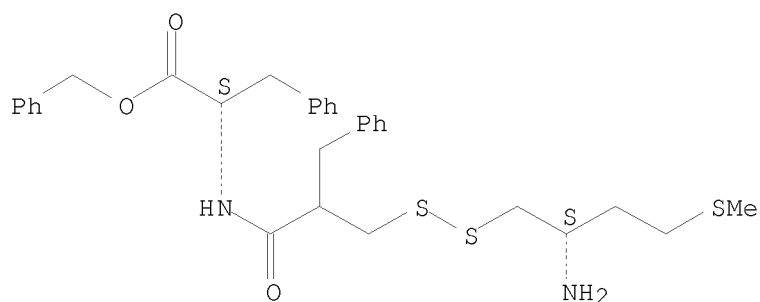
CN L-Phenylalanine, N-[2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester, methanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 135949-60-9

CMF C31 H38 N2 O3 S3

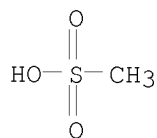
Absolute stereochemistry.



CM 2

CRN 75-75-2

CMF C H4 O3 S



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 22 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:607632 CAPLUS  
 DOCUMENT NUMBER: 129:312392  
 ORIGINAL REFERENCE NO.: 129:63665a  
 TITLE: Annealing of two- $\alpha$ -helix structure by metal ion binding regulated with trifluoroethanol  
 AUTHOR(S): Sakamoto, Seiichi; Ueno, Akihiko; Mihara, Hisakazu  
 CORPORATE SOURCE: Department of Bioengineering, Tokyo Institute of Technology, Faculty of Bioscience and Biotechnology, Yokohama, 226-8501, Japan  
 SOURCE: Chemistry Letters (1998), (9), 867-868  
 CODEN: CMLTAG; ISSN: 0366-7022  
 PUBLISHER: Chemical Society of Japan  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB A designed two- $\alpha$ -helix peptide His-2 $\alpha$  bound effectively a transition metal ion, such as Cu<sup>2+</sup> and Zn<sup>2+</sup> in buffer containing 10-30% trifluoroethanol, with the  $\alpha$ -helix structure being annealed by the metal ion binding.

IT 189377-38-6P  
 RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); PROC (Process)  
 (amino acid sequence; construction of artificial metallopeptide which increased  $\alpha$ -helicity via Zn<sup>2+</sup> binding by ligation with two His residues in 2 $\alpha$ -helix structure)

RN 189377-38-6 CAPLUS

CN L-Cysteinamide, N-acetyl-L-alanyl-L-leucyl-L- $\alpha$ -glutamyl-L-glutaminyll-L-lysyl-L-histidyl-L-alanyl-L-alanyl-L-leucyl-L- $\alpha$ -glutamyl-L-glutaminyll-L-lysyl-L-leucyl-L-alanyl- $\beta$ -alanyl-, bimol. (16 $\rightarrow$ 16')-disulfide (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 23 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:605708 CAPLUS  
 DOCUMENT NUMBER: 129:309943  
 ORIGINAL REFERENCE NO.: 129:63087a, 63090a  
 TITLE: Nickel Complexes of Cysteine- and Cystine-Containing Peptides: Spontaneous Formation of Disulfide-Bridged Dimers at Neutral pH  
 AUTHOR(S): Ross, Steven A.; Burrows, Cynthia J.  
 CORPORATE SOURCE: Department of Chemistry, University of Utah, Salt Lake City, UT, 84112-0850, USA  
 SOURCE: Inorganic Chemistry (1998), 37(20), 5358-5363  
 CODEN: INOCAJ; ISSN: 0020-1669  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Nine tripeptide ligands XCH (X = glycine or lysine, C = cysteine, H = histidine) were prepared, and the coordination chemical of these peptides with

Ni(II) was studied. The cysteine residues were incorporated as free thiols, as protected (tert-butyl) thiols, or as disulfide-bridged cysteine dimers, and the histidine residues had either carboxylate (CO<sub>2</sub>H) or carboxamide (CONH<sub>2</sub>) C-termini. The Ni(II) complexes of the protected thiols exhibited no interaction of the side chain with the metal, giving UV and electrochem. data which were consistent with related tripeptide species. The Ni(II) complexes of the free thiol-containing ligands GCH-CONH<sub>2</sub>, KCH-CONH<sub>2</sub>, and GCH-CO<sub>2</sub>H dimerize rapidly via disulfide bond formation in the presence of air at pH 7. These processes were confirmed by independent synthesis of the dimeric (cystine) ligands and preparation of their Ni(II) complexes. The disulfide-bridged complex with a carboxylate terminus Ni<sub>2</sub>(GCH-CO<sub>2</sub>H)<sub>2</sub> showed no further reactivity with O, which was unusual, since Ni(II) complexes of XXH-CO<sub>2</sub>H peptides are known to spontaneously decarboxylate in air.

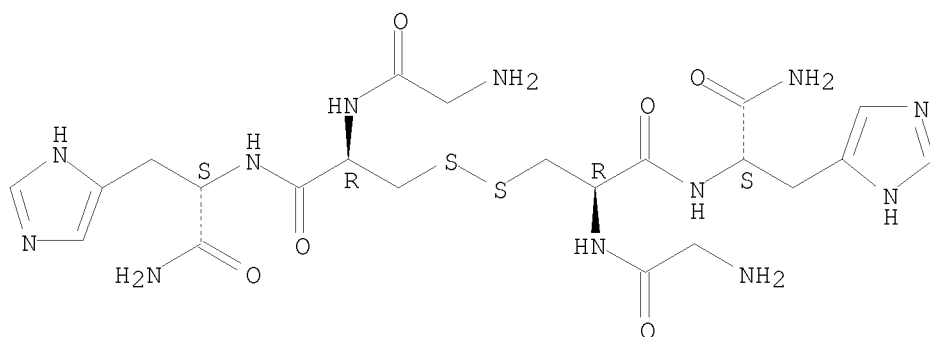
IT 214535-85-0P 214535-86-1P 214535-87-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and complexation with nickel)

RN 214535-85-0 CAPLUS

CN L-Histidinamide, glycyl-L-cysteinyl-, bimol. (2→2')-disulfide (9CI)  
(CA INDEX NAME)

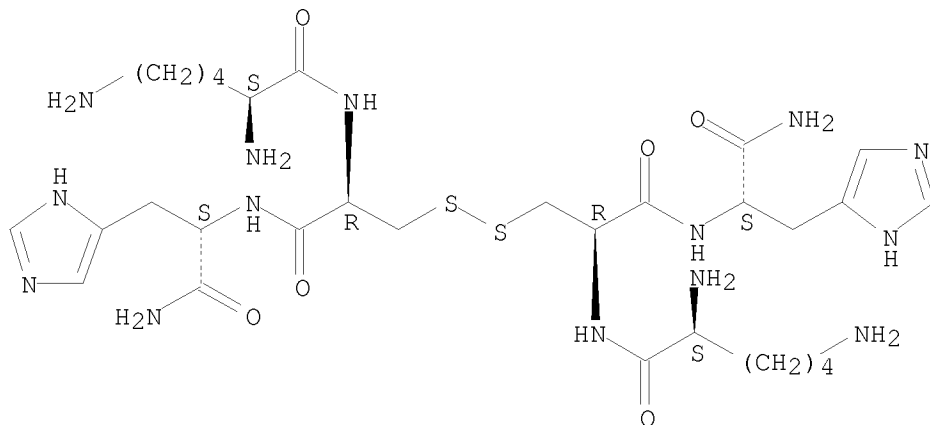
Absolute stereochemistry.



RN 214535-86-1 CAPLUS

CN L-Histidinamide, L-lysyl-L-cysteinyl-, bimol. (2→2')-disulfide (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

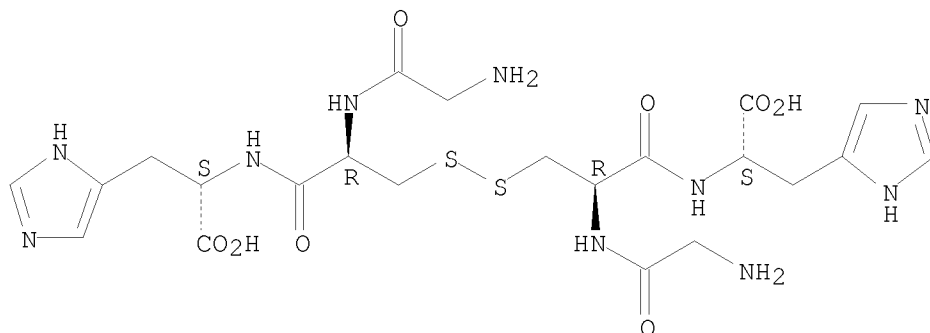


RN 214535-87-2 CAPLUS

CN L-Histidine, glycyl-L-cysteinyl-, bimol. (2→2')-disulfide (9CI)

(CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 24 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:596614 CAPLUS

DOCUMENT NUMBER: 129:290295

ORIGINAL REFERENCE NO.: 129:59167a, 59170a

TITLE: Synthesis of sulfur-containing cationic lipids of the 1,3-dioxolane type

AUTHOR(S): Klykov, V. N.; Serebrennikova, G. A.

CORPORATE SOURCE: M. V. Lomonosov Moscow State Academy of Fine Chemical Technology, Moscow, 117571, Russia

SOURCE: Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya Khimicheskaya) (1998), 47(8), 1547-1549

CODEN: RCBUEY; ISSN: 1066-5285

PUBLISHER: Consultants Bureau

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:290295

AB A series of cationic acetal lipids containing different spacer and cationic groups were synthesized starting from 1,2-O-hexadecylidene-3-thioglycerol.

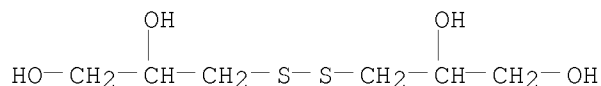
IT 4807-52-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of sulfur-containing cationic lipids of the 1,3-dioxolane type)

RN 4807-52-7 CAPLUS

CN 1,2-Propanediol, 3,3'-dithiobis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 25 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:587824 CAPLUS

DOCUMENT NUMBER: 129:306418

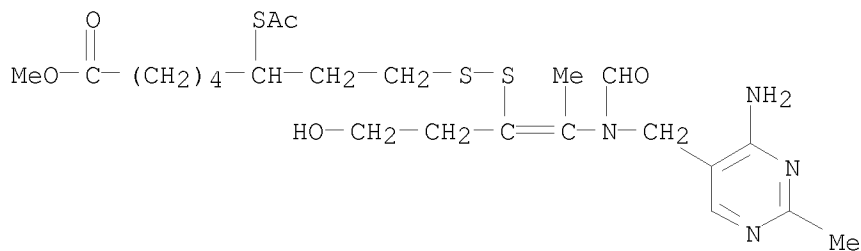
ORIGINAL REFERENCE NO.: 129:62449a, 62452a

TITLE: Influence of powder characteristics of bulk substance with pharmaceutical processing

AUTHOR(S): Tomozawa, Hiroki; Momonaga, Masashi; Uemura,

Toshinobu; Yazawa, Hisatoyo  
 CORPORATE SOURCE: Manufacturing Technol. Lab., Fujisawa Pharmaceutical  
 Co., Ltd., Kashima, Yodogawaku, Osaka, 532, Japan  
 SOURCE: Drug Development and Industrial Pharmacy (1998),  
 24(9), 857-861  
 CODEN: DDIPD8; ISSN: 0363-9045  
 PUBLISHER: Marcel Dekker, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The physicochem. properties of crystals can vary with the crystallization  
 procedure employed in their isolation and purification. Moreover, the success  
 of any direct-tableting procedure is directly effected by the quality of  
 the crystals used in this process. We examined the conventional  
 crystallization  
 method employed in the isolation and purification of octotiamine crystals, the  
 active component of the pharmaceutical Neuvita. The objective was to determine  
 under what crystallization conditions (i.e., supersatn. ratio [pH],  
 temperature,  
 impeller speed) octotiamine crystals with excellent direct-tableting  
 potential could be obtained. Modifications in pH level (from 4.3 to 4.0),  
 i.e., a reduction in the supersatn. ratio, and in impeller speed (from 100 to  
 78 rpm) are necessary to obtain octotiamine crystals with superior  
 flowability and compressibility compared to the use of the conventional  
 crystallization method. Thus, with these modifications in the conventional  
 crystallization method, octotiamine crystals can be made that show dissoln.  
 rates  
 similar to those of the conventionally made crystals, yet which can be  
 manufactured into tablets using a simpler method (i.e., direct tableting).  
 Also, the tableting powder made from the new crystal type proved to be  
 less adhesive than the conventionally made crystal powder. This property  
 attributed to the new crystal type will allow for more stable automated  
 manufacturing than the conventional crystal type would allow.  
 IT 137-86-0, Octotiamine  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU  
 (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (powder characteristics of drug for pharmaceutical processing)  
 RN 137-86-0 CAPLUS  
 CN Octanoic acid, 6-(acetylthio)-8-[[2-[[[(4-amino-2-methyl-5-  
 pyrimidinyl)methyl]formylamino]-1-(2-hydroxyethyl)-1-propen-1-yl]dithio]-,  
 methyl ester (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 26 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:582628 CAPLUS  
 DOCUMENT NUMBER: 129:301508  
 ORIGINAL REFERENCE NO.: 129:61485a, 61488a  
 TITLE: N-terminal peptides of stromal cell-derived factor-1  
 with CXC chemokine receptor 4 agonist and antagonist  
 activities

AUTHOR(S): Loetscher, Pius; Gong, Jiang-Hong; Dewald, Beatrice;  
Baggiolini, Marco; Clark-Lewis, Ian  
CORPORATE SOURCE: Theodor-Kocher Institute, University of Bern, Bern, CH  
3000, Switz.  
SOURCE: Journal of Biological Chemistry (1998), 273(35),  
22279-22283  
CODEN: JBCHA3; ISSN: 0021-9258  
PUBLISHER: American Society for Biochemistry and Molecular  
Biology  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Peptides corresponding to the N-terminal 9 residues of stromal  
cell-derived factor-1 (SDF-1) have SDF-1 activity. SDF-1, 1-8, 1-9, 1-9  
dimer, and 1-17 induced intracellular calcium and chemotaxis in T  
lymphocytes and CEM cells and bound to CXC chemokine receptor 4 (CXCR4).  
The peptides had similar activities to SDF-1 but were less potent.  
Whereas native SDF-1 had half-maximal chemoattractant activity at 5 nM,  
the 1-9 dimer required 500 nM and was therefore 100-fold less potent. The  
1-17 and a 1-9 monomer analog were 4- and 36-fold, resp., less potent than  
the 1-9 dimer. Both the chemotactic and calcium response of the 1-9 dimer  
was inhibited by an antibody to CXCR4. The basis for the enhanced  
activity of the dimer form of SDF-1, 1-9 is uncertain, but it could  
involve an addnl. fortuitous binding site on the 1-9 peptide in addition to  
the normal SDF-1, 1-9 site. A 1-9 analog, 1-9[P2G] dimer, was a CXCR4  
antagonist. Thus, the N-terminal peptides are CXCR4 agonists or  
antagonists, and these could be leads for high affinity ligands.

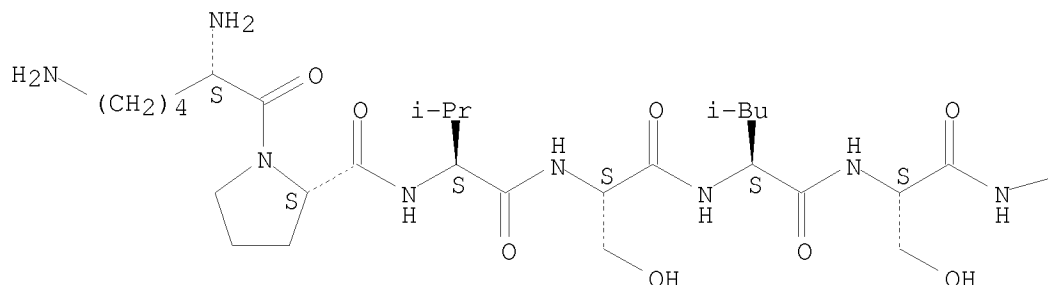
IT 214402-75-2 214402-76-3  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); BIOL (Biological study)  
(N-terminal peptides of stromal cell-derived factor-1 with CXCR4  
receptor agonist and antagonist activities)

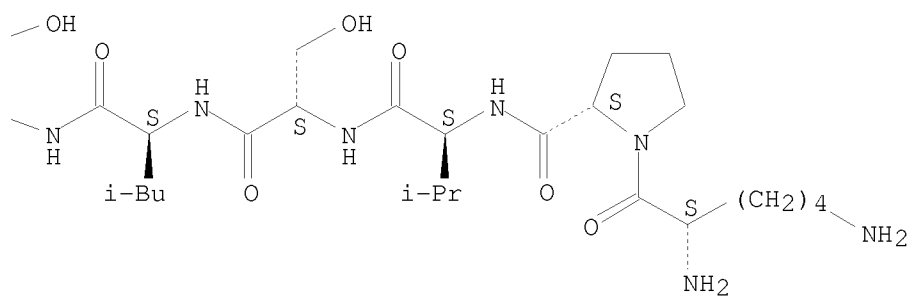
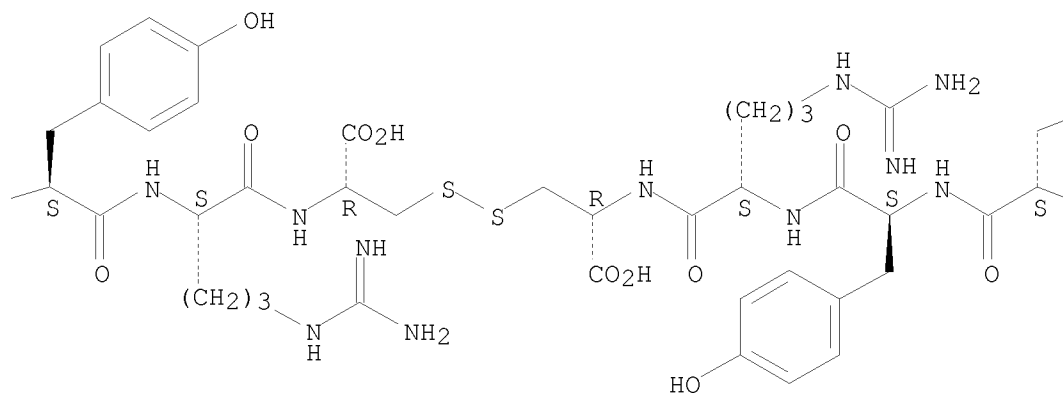
RN 214402-75-2 CAPLUS

CN L-Cysteine, L-lysyl-L-prolyl-L-valyl-L-seryl-L-leucyl-L-seryl-L-tyrosyl-L-  
arginyl-, bimol. (9→9')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

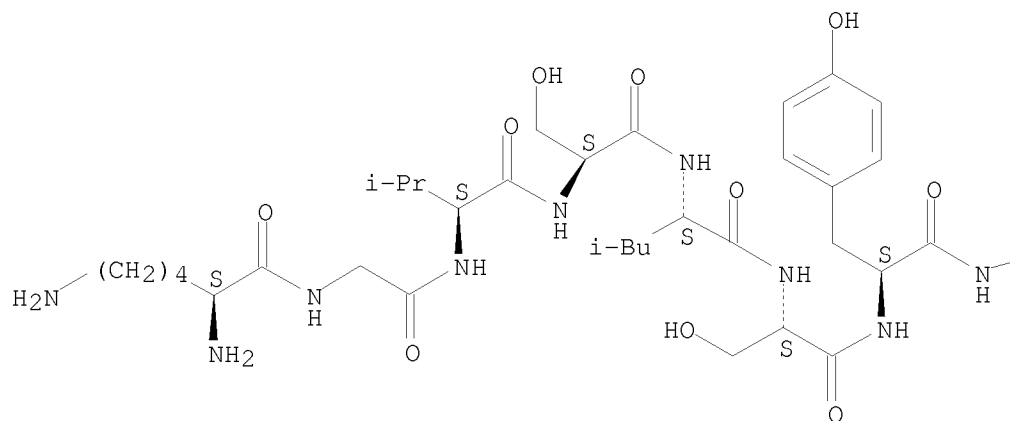




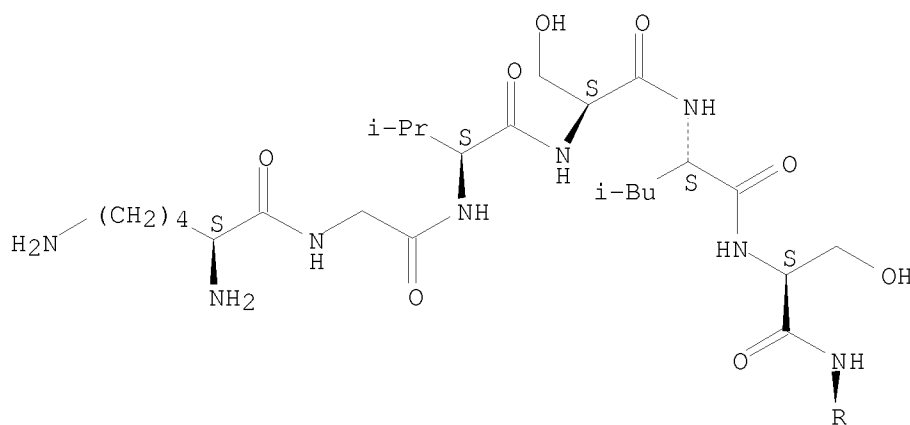
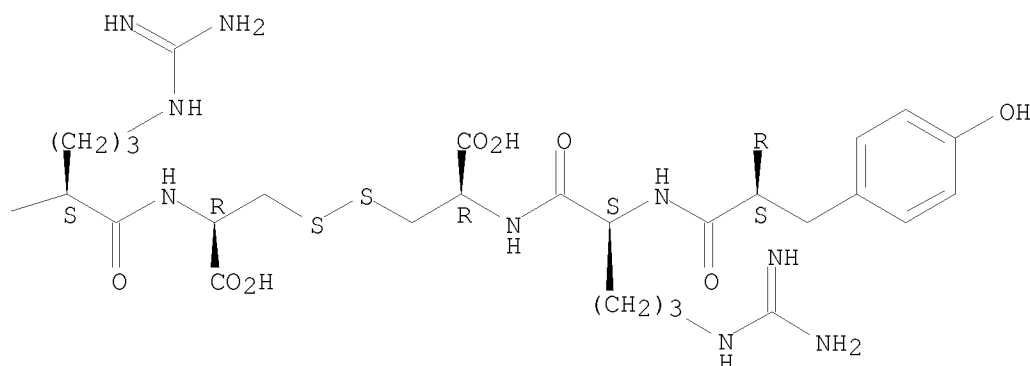
RN 214402-76-3 CAPLUS

CN L-Cysteine, L-lysylglycyl-L-valyl-L-seryl-L-leucyl-L-seryl-L-tyrosyl-L-arginyl-, bimol. (9→9')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



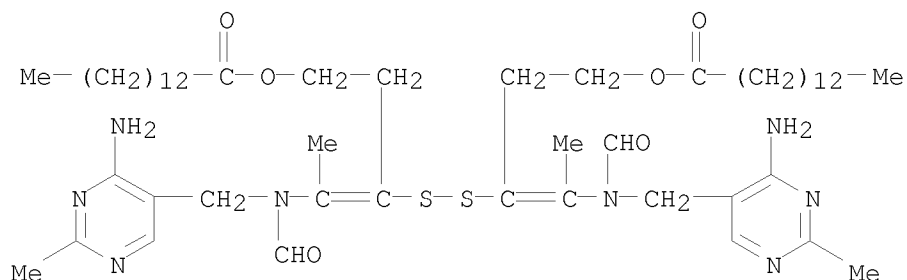




REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 27 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:576850 CAPLUS  
 DOCUMENT NUMBER: 129:339399  
 ORIGINAL REFERENCE NO.: 129:68989a,68992a  
 TITLE: Development of anti-HIV-1 drug for drug-resistant HIV-1  
 AUTHOR(S): Shoji, Shozo  
 CORPORATE SOURCE: Fac. Pharm. Sci., Kumamoto Univ., Kumamoto, 862, Japan  
 SOURCE: Saishin Igaku (1998), 53(9), 2047-2060  
 CODEN: SAIGAK; ISSN: 0370-8241  
 PUBLISHER: Saishin Igakusha  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: Japanese  
 AB A review with 15 refs., on developmental strategies of anti-AIDS drugs against drug-resistant HIV-1, discussing development, effects, and action mechanism of o,o'-bis(myristoylthiamine) disulfide (BMT) targeting HIV-1 Tat and NF-κB, and inhibition of HIV-1 protease by p2gag peptide.  
 IT 188025-51-6  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (development of anti-HIV-1 drug for drug-resistant HIV-1)

RN 188025-51-6 CAPLUS  
 CN Tetradecanoic acid, dithiobis[3-[1-[[[4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]ethylidene]-3,1-propanediyl] ester (9CI)  
 (CA INDEX NAME)



L27 ANSWER 28 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:575214 CAPLUS

DOCUMENT NUMBER: 129:285636

ORIGINAL REFERENCE NO.: 129:58057a, 58060a

TITLE: An allosteric drug, o,o'-bismyristoyl thiamine disulfide, suppresses HIV-1 replication through prevention of nuclear translocation of both HIV-1 Tat and NF- $\kappa$ B

AUTHOR(S): Shoji, Shozo; Furuishi, Kazuchika; Ogata, Akihito; Yamataka, Kazunobu; Tachibana, Kuniomi; Mukai, Ryozauro; Uda, Akihiko; Harano, Kazunobu; Matsushita, Shuzo; Misumi, Shogo

CORPORATE SOURCE: Department of Biochemistry, Faculty of Pharmaceutical Sciences, Kumamoto University, Kumamoto, 862-0973, Japan

SOURCE: Biochemical and Biophysical Research Communications (1998), 249(3), 745-753

CODEN: BBRC9; ISSN: 0006-291X

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The efficacy of o,o'-bismyristoyl thiamine disulfide (BMT) was examined in detail against HIV-1 laboratory isolates (HTLV-III<sub>B</sub>, JRFL, and MN), primary isolates (KMT and KMO), and simian immunodeficiency virus (SIVmac251) in vitro. BMT inhibited the replication of HIV-1 in both laboratory and primary isolates in vitro. In addition, BMT exhibited antiviral activity against SIVmac251. Minimizing energy studies of BMT structure reveal that a trans-disulfide of thiamine (holo drug) disulfide (TDS, prodrug) is allosterically transited to the reactive twisted disulfide of BMT (allo drug) by o, o'-bismyristoyl esterification of TDS. BMT inhibits nuclear translocation of both HIV-1 transactivator (Tat) and the cellular transcriptional nuclear factor- $\kappa$ B (NF- $\kappa$ B), resulting in the suppression of HIV-1 replication. (c) 1998 Academic Press.

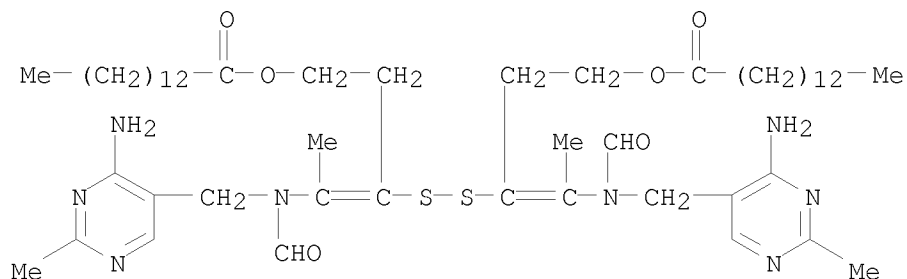
IT 188025-51-6

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(allosteric drug, o,o'-bismyristoyl thiamine disulfide, suppresses HIV-1 replication through prevention of nuclear translocation of both HIV-1 Tat and NF- $\kappa$ B)

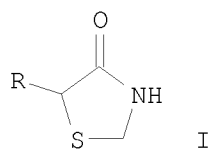
RN 188025-51-6 CAPLUS

CN Tetradecanoic acid, dithiobis[3-[1-[[[4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]ethylidene]-3,1-propanediyl] ester (9CI)  
 (CA INDEX NAME)

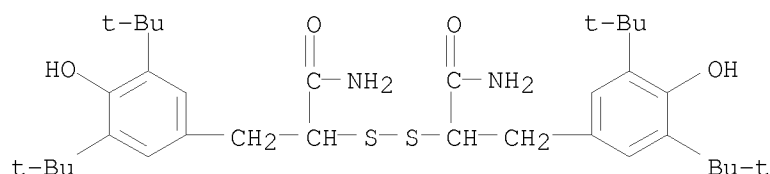


REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 29 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:543814 CAPLUS  
 DOCUMENT NUMBER: 129:244677  
 ORIGINAL REFERENCE NO.: 129:49817a, 49820a  
 TITLE: Product structures as a function of reaction conditions in the reaction of formaldehyde with an alpha-mercapto amide  
 AUTHOR(S): Copp, James D.; Ginah, Francis O.; Hansen, Marvin M.; Kjell, Douglas P.; Slattey, Brain J.  
 CORPORATE SOURCE: Chem. Process Res. Development, Lilly Res. Laboratories, Indianapolis, IN, 46285, USA  
 SOURCE: Heterocycles (1998), 48(7), 1307-1312  
 CODEN: HTCYAM; ISSN: 0385-5414  
 PUBLISHER: Japan Institute of Heterocyclic Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 129:244677  
 GI



AB Treatment of an  $\alpha$ -mercapto amide with formaldehyde and acid or base results in products whose structures are a function of the reaction conditions. A lactone, hemithioacetal, and dimer were formed in good yields under acidic reaction conditions. The desired thiazolidinone I (R = 4,3,5-(HO)But2C6H2CH2) was also prepared  
 IT 213034-68-5P  
 RL: BYP (Byproduct); PREP (Preparation)  
 (reaction of formaldehyde with an  $\alpha$ -mercapto amide)  
 RN 213034-68-5 CAPLUS  
 CN Benzenepropanamide,  $\alpha, \alpha'$ -dithiobis[3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 30 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:533464 CAPLUS

DOCUMENT NUMBER: 129:254876

ORIGINAL REFERENCE NO.: 129:51751a, 51754a

TITLE: Involvement of  $\delta$ -opioid receptors in the effects induced by endogenous enkephalins on learned helplessness model

AUTHOR(S): Tejedor-Real, Purificacion; Mico, Juan A.; Smadja, Claire; Maldonado, Rafael; Roques, Bernard P.; Gibert-Rahola, Juan

CORPORATE SOURCE: School of Medicine, Department of Neurosciences, University of Cadiz, Cadiz, Spain

SOURCE: European Journal of Pharmacology (1998), 354(1), 1-7  
CODEN: EJPHAZ; ISSN: 0014-2999

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Pharmacol., neurochem. and behavioral findings support a possible role of endogenous opioids in clin. depression. There is evidence from animal studies that  $\delta$ -opioid receptors are involved in several behavioral responses to opioids, including motivational activities. In the present study, the mixed enkephalin catabolism inhibitor, RB 101 {N-[(R,S)-2-benzyl-3-[(S)(2-amino-4-methylthio)butyldithio]-1-oxopropyl]-1-phenylalanine benzyl ester} (1.25, 2.5 and 5 mg/kg), induced a dose-dependent antidepressant-like effect in a learned helplessness model. Thus, RB 101 reversed escape deficits in rats previously subjected to inescapable shocks, suggesting the involvement of endogenous enkephalins in depression. Similar effects were observed after administration of the selective  $\delta$ -opioid receptor agonist, BUBU (Tyr-D.Ser-(O-tert-butyl)-Gly-Phe-Leu-Thr(O-Tet-butyl-OH)) (1 and 2 mg/kg). Moreover, RB 101 effects were antagonized by administration of naltrindole (NTI) (0.1 mg/kg), which points to a preferential involvement of  $\delta$ -opioid receptors in this enkephalin-controlled behavior. As RB 101 has been reported to be almost devoid of opiate-related side-effects, it could represent a promising alternative in the treatment of depressive patients who are unresponsive to, or intolerant of, classical antidepressants.

IT 203498-62-8, RB 101

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antidepressant effects of the mixed enkephalin catabolism inhibitor RB 101 in the learned helplessness model)

RN 203498-62-8 CAPLUS

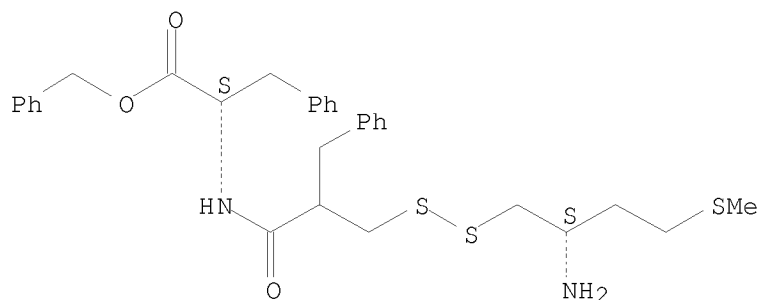
CN L-Phenylalanine, N-[2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester, methanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 135949-60-9

CMF C31 H38 N2 O3 S3

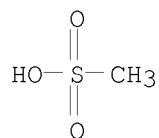
Absolute stereochemistry.



CM 2

CRN 75-75-2

CMF C H4 O3 S



REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 31 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:533079 CAPLUS

DOCUMENT NUMBER: 129:272385

ORIGINAL REFERENCE NO.: 129:55469a, 55472a

TITLE: Myelosuppressive changes from single or repeated doses of radioantibody therapy: effect of bone marrow transplantation, cytokines, and hematopoietic suppression

AUTHOR(S): Blumenthal, Rosalyn D.; Alisauskas, Rita; Lew, Walter; Sharkey, Robert M.; Goldenberg, David M.

CORPORATE SOURCE: Garden State Cancer Center, Belleville, NJ, 07109, USA

SOURCE: Experimental Hematology (Charlottesville, Virginia)

(1998), 26(9), 859-868

CODEN: EXHMA6; ISSN: 0301-472X

PUBLISHER: Carden Jennings Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Myelosuppression is the dose-limiting side effect of most forms of radioimmunotherapy (RAIT). Long-term leukopenia (4-8 wk) has been documented from a single maximum tolerated dose (MTD) in exptl. mice. Several methods for alleviating RAIT-induced marrow toxicity have been evaluated preclinically, including cytokine intervention, bone marrow transplantation (BMT), and hemoregulatory peptide administration. To improve the therapeutic potential of RAIT, multiple doses of radioantibody must be delivered. Maximizing the frequency of radioantibody administration is desirable. However, little is known about the myelotoxic effects of multiple cycles of RAIT. In the studies presented here we compared the magnitude of myelosuppression, the time of nadir, and the duration of toxicity associated with one or two MTDs of I-131-MN-14 anti-carcinoembryonic antigen IgG (250  $\mu$ Ci) administered to BALB/c mice 49 days apart, the shortest interval possible without producing lethality.

Studies were conducted with radioantibody alone or with cytokines (interleukin-1/granulocyte-macrophage colony-stimulating factor), BMT, or Hp5b to determine whether bone marrow became more "brittle" after the first dose. Profiles of myelosuppression and recovery were monitored weekly for 7 wk after each dose in both granulocyte and lymphocyte populations. The results demonstrated that granulocyte suppression was greater and of longer duration after the second dose of RAIT administered alone, with cytokines, or with BMT, but less severe with Hp5b. For example, in the RAIT + BMT treatment, the second dose resulted in an 87% loss of granulocytes, whereas a 30% loss occurred after the first dose. The nadir of toxicity lasted until days 21 to 28 after the second dose and until day 14 after the first dose. Lymphocyte suppression was of greater duration after the second cycle of RAIT alone or RAIT with BMT, plateauing at <50% of untreated levels between days 28 and 49, but was of shorter duration when RAIT was given with cytokines or Hp5b. The results are discussed in terms of 1) the radiosensitivity of each subpopulation, 2) the effects on progenitors and on stromal cells, 3) the benefits of increasing dose frequency vs. increasing dose intensity, and 4) the possibility of using preclin. data to optimize the frequency of dosing in patient trials.

IT 115150-61-3, Hp5b

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

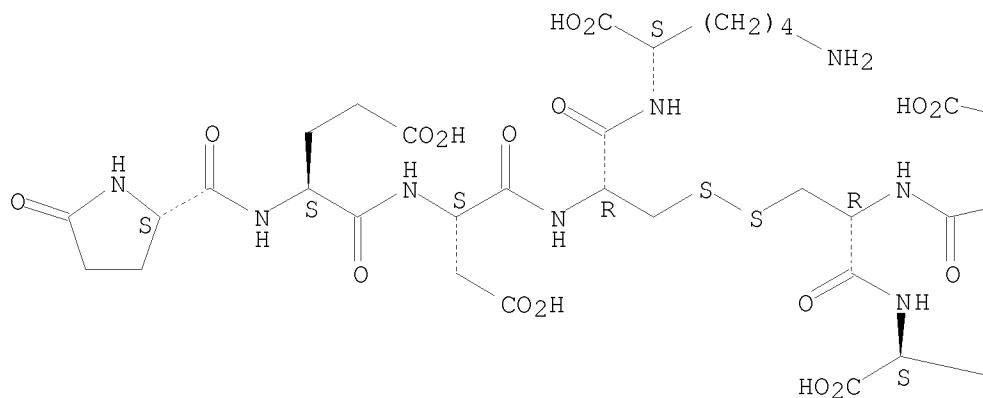
(myelosuppressive changes from single or repeated doses of radioantibody therapy: effect of bone marrow transplantation, cytokines, and hematopoietic suppression)

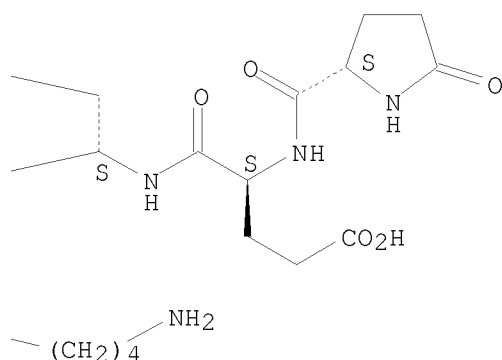
RN 115150-61-3 CAPLUS

CN L-Lysine, 5-oxo-L-prolyl-L- $\alpha$ -glutamyl-L- $\alpha$ -aspartyl-L-cysteinyl-, bimol. (4 $\rightarrow$ 4')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 32 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:533078 CAPLUS

DOCUMENT NUMBER: 129:288948

ORIGINAL REFERENCE NO.: 129:58865a

TITLE: Activated granulocytes oxidize the endogenous stem cell inhibitory peptide pGlu-Glu-Asp-Cys-Lys (pEEDCK) to the stimulatory dimer: a redox-mediated mechanism for demand-induced hematopoietic regulation

AUTHOR(S): Paukovits, Walter R.; Paukovits, Johanna B.; Moser, Marie-Helene; Konstantinov, Spiro; Schulte-Hermann, R.

CORPORATE SOURCE: Institute for Tumor Biology-Cancer Research, University of Vienna, Vienna, A-1090, Austria

SOURCE: Experimental Hematology (Charlottesville, Virginia) (1998), 26(9), 851-858

CODEN: EXHMA6; ISSN: 0301-472X

PUBLISHER: Carden Jennings Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We have previously shown that the pentapeptide pGlu-Glu-Asp-Cys-Lys (pEEDCK), which is associated with mature leukocytes, maintains pluripotent hematopoietic stem cells (colony-forming units-spleen [CFU-S]) in a quiescent state under physiol. conditions. It is also known that its oxidation product, the disulfide-bonded homodimer (pEEDCK)<sub>2</sub>, is a growth factor for CFU-S in vivo. In this paper we report on the combined actions of the monomer and dimer in inducing rapid changes in stem cell proliferation in vivo. A single injection of 20 µg/kg synthetic dimer into mice stimulated CFU-S proliferation (60% in S-phase after 9-11 h) and population expansion. Stimulated CFU-S traversed one cell cycle, with an estimated S-phase time of 5.5 h, and then become quiescent again. Proliferation of CFU-S in response to dimer showed no sensitivity to the inhibitory effects of monomeric pEEDCK, whereas CFU-S proliferation did display sensitivity to inhibition after injection of cytosine arabinoside or doxorubicin. Products of mature granulocytes undergoing an oxidative burst reaction rapidly oxidized monomeric pEEDCK to the dimer. The suppressive effect of endogenous pEEDCK monomer on stem cell proliferation was thus converted within minutes to a stimulatory signal (dimer). Because many in vivo situations (e.g., infection) requiring increased hematopoiesis involve granulocyte and macrophage activation, the formation of dimer from endogenous pEEDCK monomer may provide an almost instantaneous demand-induced emergency signal for increasing stem cell proliferation and blood cell production

IT 115150-61-3P

RL: BAC (Biological activity or effector, except adverse); BPR (Biological

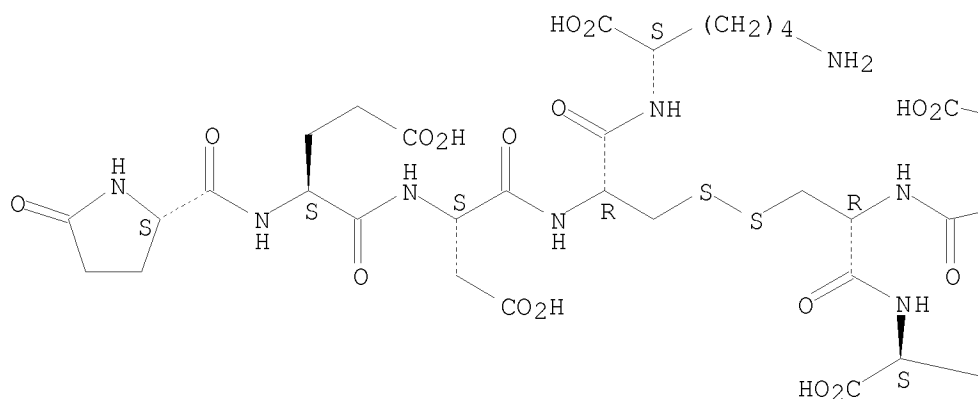
process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process) (activated granulocytes oxidize endogenous stem cell inhibitory peptide pGlu-Glu-Asp-Cys-Lys (pEEDCK) to the stimulatory dimer: a redox-mediated mechanism for demand-induced hematopoietic regulation)

RN 115150-61-3 CAPLUS

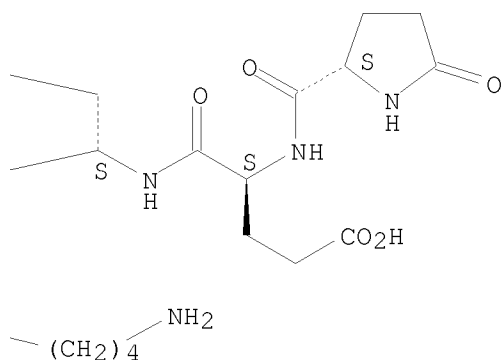
CN L-Lysine, 5-oxo-L-prolyl-L- $\alpha$ -glutamyl-L- $\alpha$ -aspartyl-L-cysteinyl-, bimol. (4 $\rightarrow$ 4')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 33 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:505738 CAPLUS

DOCUMENT NUMBER: 129:254345

ORIGINAL REFERENCE NO.: 129:51619a, 51622a

TITLE:  $\beta$ -Amino-thiols Inhibit the Zinc Metalloproteinase Activity of Tetanus Toxin Light Chain

AUTHOR(S): Martin, Loic; Cornille, Fabrice; Coric, Pascale; Roques, Bernard P.; Fournie-Zaluski, Marie-Claude

CORPORATE SOURCE: Departement de Pharmacochimie Moleculaire et Structurale, UFR des Sciences Pharmaceutiques et Biologiques, Paris, 75270, Fr.

SOURCE: Journal of Medicinal Chemistry (1998), 41(18),



3450-3460

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:254345

AB Tetanus neurotoxin is a 150-kDa protein produced by *Clostridium tetani*, which causes the lethal spastic paralytic syndromes of tetanus by blocking inhibitory neurotransmitter release at central synapses. The toxin light chain (50 kDa) has a zinc endopeptidase activity specific for synaptobrevin, an essential component of the neuroexocytosis apparatus. Previous unsuccessful attempts to block the proteolytic activity of this neurotoxin with well-known inhibitors of other zinc proteases led the authors to study the design of specific inhibitors as a possible drug therapy to prevent the progressive evolution of tetanus following infection. Starting from the synaptobrevin sequence at the level of the cleavage site by tetanus neurotoxin (Gln76-Phe77), a thiol analog of glutamine demonstrated inhibitory activities in the millimolar range. A structure-activity relation performed with this compound led the authors to determine the requirement for the correct positioning of the thiol group, the primary amino group, and a carboxamide or sulfonamide group on the side chain. This resulted in the design of a  $\beta$ -amino-(4-sulfamoylphenyl)glycine-thiol, the first significantly efficient inhibitor of tetanus neurotoxin with a  $K_i$  value of 35  $\mu\text{M}$ .

IT 213487-85-5P 213488-18-7P

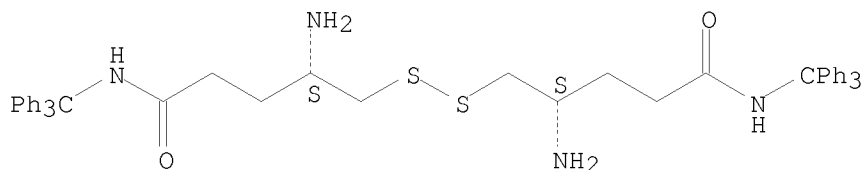
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate;  $\beta$ -amino-thiols inhibit zinc metallopeptidase activity of tetanus toxin light chain)

RN 213487-85-5 CAPLUS

CN Pentanamide, 5,5'-dithiobis[4-amino-N-(triphenylmethyl)-, (4S,4'S)-(9CI)  
(CA INDEX NAME)

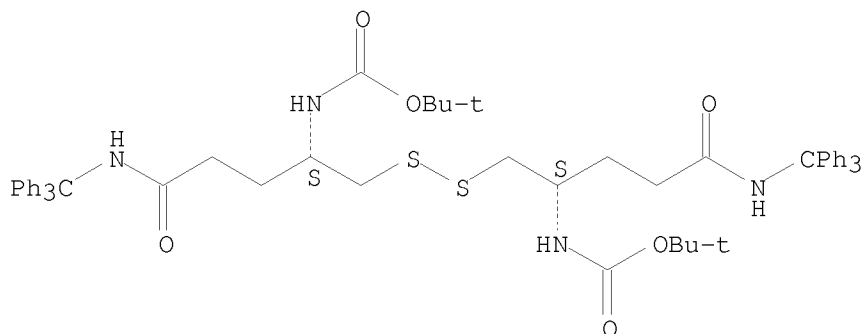
Absolute stereochemistry.



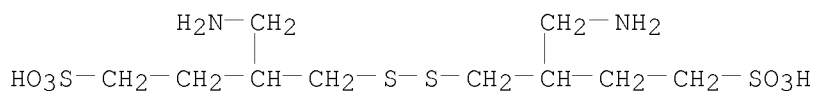
RN 213488-18-7 CAPLUS

CN 11-Oxa-5,6-dithia-2,9-diazatridecanoic acid, 12,12-dimethyl-10-oxo-3,8-bis[3-oxo-3-[(triphenylmethyl)amino]propyl]-, 1,1-dimethylethyl ester, (3S,8S)- (CA INDEX NAME)

Absolute stereochemistry.

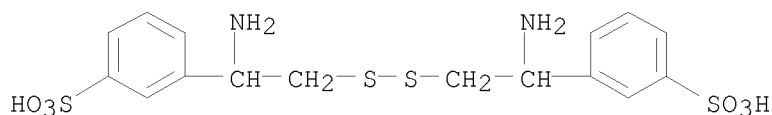


IT 213488-14-3P 213488-15-4P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (β-amino-thiols inhibit zinc metallopeptidase activity of tetanus toxin light chain)  
 RN 213488-14-3 CAPLUS  
 CN 1-Butanesulfonic acid, 4,4'-dithiobis[3-(aminomethyl)-, disodium salt (9CI) (CA INDEX NAME)



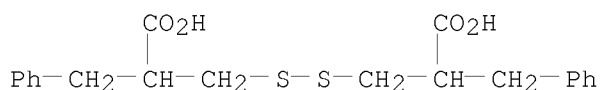
● 2 Na

RN 213488-15-4 CAPLUS  
 CN Benzenesulfonic acid, 3,3'-[dithiobis(1-amino-2,1-ethanediyl)]bis-, disodium salt (9CI) (CA INDEX NAME)



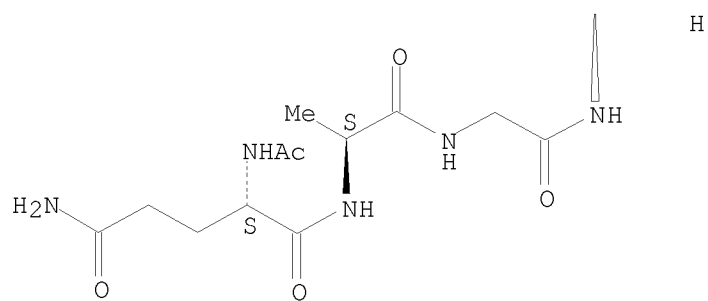
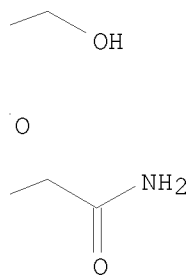
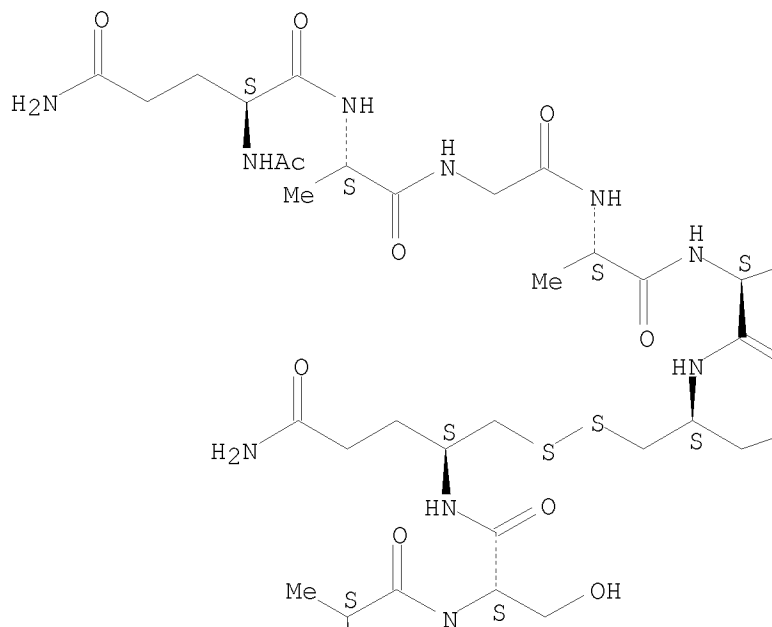
● 2 Na

IT 141437-87-8P 213487-78-6P 213487-79-7P  
 213487-80-0P 213487-81-1P 213487-82-2P  
 213487-83-3P 213487-84-4P 213487-86-6P  
 213488-00-7P 213488-23-4P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (β-amino-thiols inhibit zinc metallopeptidase activity of tetanus toxin light chain)  
 RN 141437-87-8 CAPLUS  
 CN Benzenepropanoic acid, α,α'-[dithiobis(methylene)]bis- (9CI) (CA INDEX NAME)



RN 213487-78-6 CAPLUS  
 CN L-Serinamide, N2-acetyl-L-glutaminy-L-alanylglycyl-L-alanyl-N-[(1S)-4-amino-1-(mercaptomethyl)-4-oxobutyl]-, bimol. (5→5')-disulfide (9CI) (CA INDEX NAME)

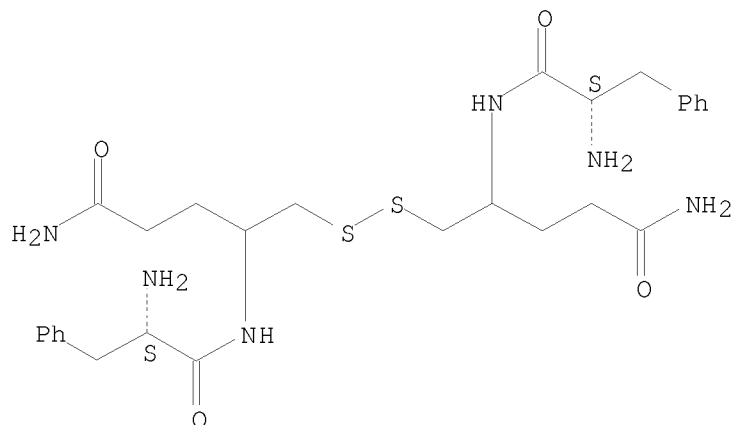
Absolute stereochemistry.



RN 213487-79-7 CAPLUS

CN Benzenepropanamide, N,N'-[dithiobis[1-(3-amino-3-oxopropyl)-2,1-ethanediyl]]bis[ $\alpha$ -amino-, ( $\alpha$ S, $\alpha'$ S)- (9CI) (CA INDEX NAME)

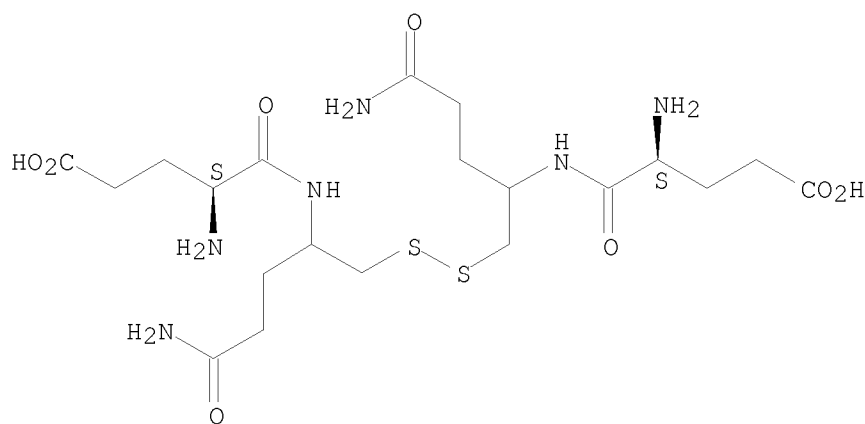
Absolute stereochemistry.



RN 213487-80-0 CAPLUS

CN Pentanoic acid, 5,5'-[dithiobis[[1-(3-amino-3-oxopropyl)-2,1-ethanediyl]imino]]bis[4-amino-5-oxo-, (4S,4'S)- (9CI) (CA INDEX NAME)

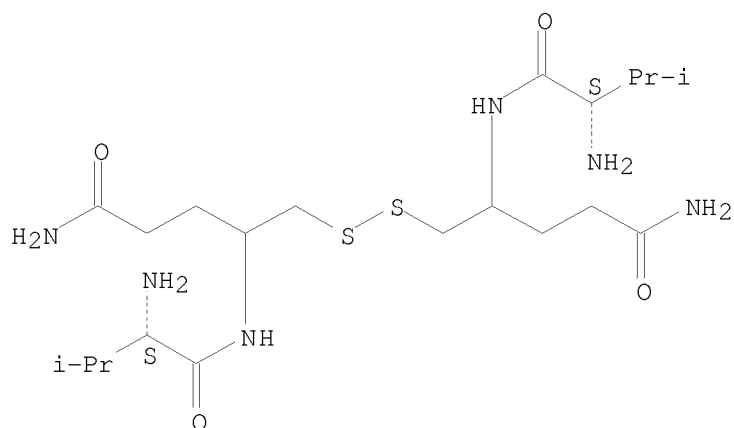
Absolute stereochemistry.



RN 213487-81-1 CAPLUS

CN Pentanamide, 5,5'-dithiobis[4-[[ (2S)-2-amino-3-methyl-1-oxobutyl]amino]- (9CI) (CA INDEX NAME)

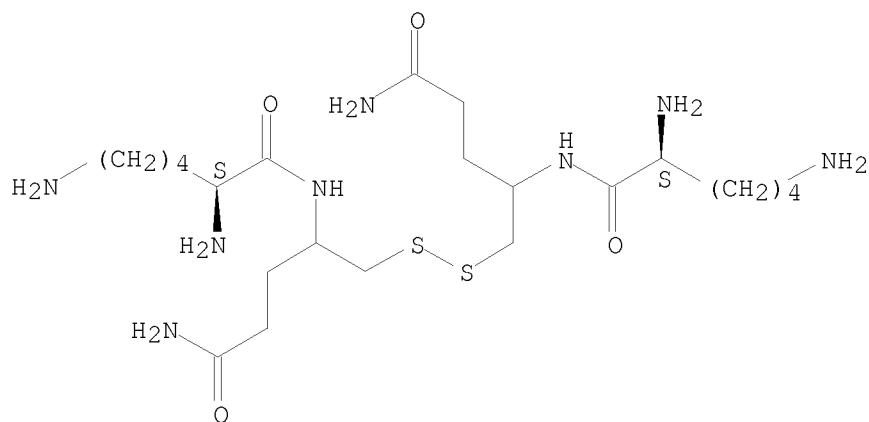
Absolute stereochemistry.



RN 213487-82-2 CAPLUS

CN Hexanamide, N,N'-[dithiobis[1-(3-amino-3-oxopropyl)-2,1-ethanediyl]]bis[2,6-diamino-, (2S,2'S)-(9CI)] (CA INDEX NAME)

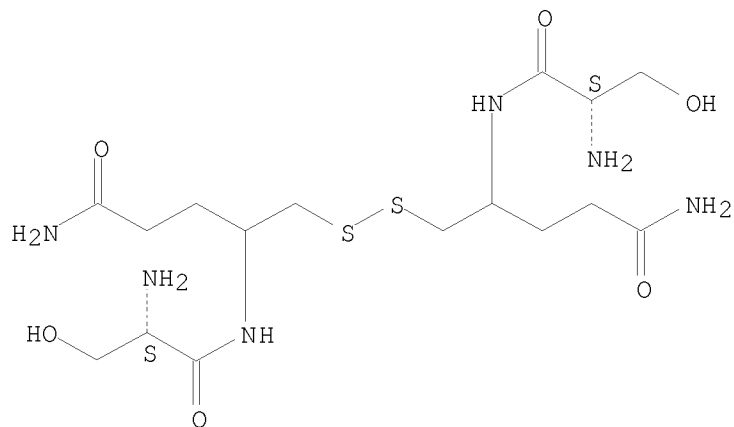
Absolute stereochemistry.



RN 213487-83-3 CAPLUS

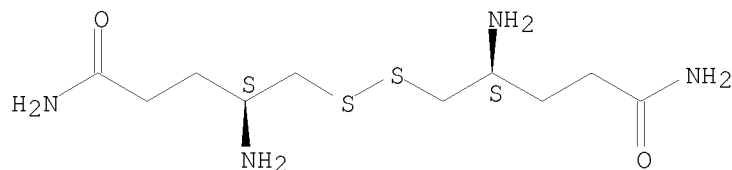
CN Pentanamide, 5,5'-dithiobis[4-[[ (2S)-2-amino-3-hydroxy-1-oxopropyl]amino]- (9CI)] (CA INDEX NAME)

Absolute stereochemistry.



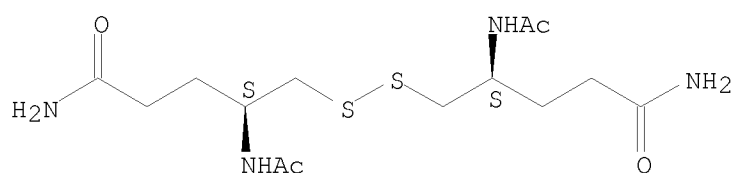
RN 213487-84-4 CAPLUS  
CN Pentanamide, 5,5'-dithiobis[4-amino-, (4S,4'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

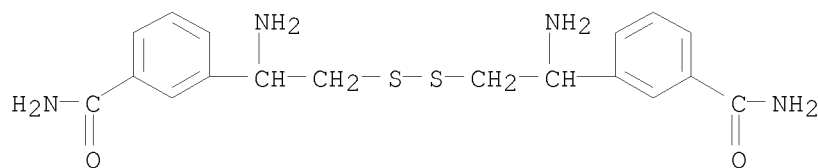


RN 213487-86-6 CAPLUS  
CN Pentanamide, 5,5'-dithiobis[4-(acetylamino)-, (4S,4'S)- (9CI) (CA INDEX NAME)

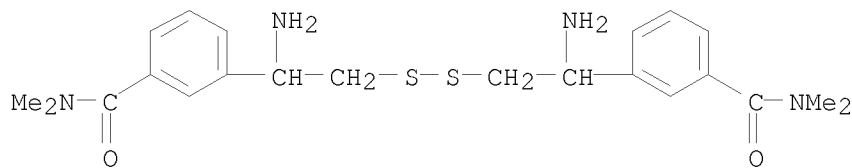
Absolute stereochemistry.



RN 213488-00-7 CAPLUS  
CN Benzamide, 3,3'-[dithiobis(1-amino-2,1-ethanediyl)]bis- (9CI) (CA INDEX NAME)



RN 213488-23-4 CAPLUS  
CN Benzamide, 3,3'-[dithiobis(1-amino-2,1-ethanediyl)]bis[N,N-dimethyl- (9CI) (CA INDEX NAME)

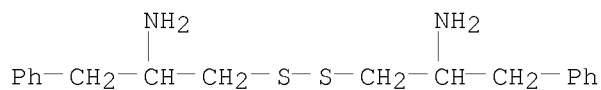


IT 146861-98-5 156143-32-7 156143-38-3  
156143-44-1 156143-66-7 156143-84-9  
156144-06-8 156144-15-9 162954-89-4  
213488-07-4 213488-08-5 213488-09-6  
213488-10-9 213488-11-0 213488-12-1  
213488-13-2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

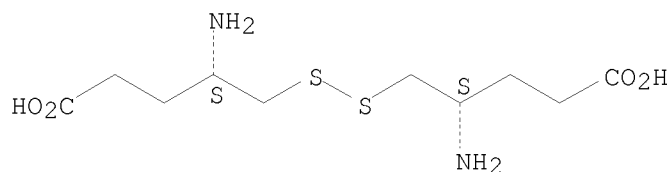
( $\beta$ -amino-thiols inhibit zinc metallopeptidase activity of tetanus

toxin light chain)  
 RN 146861-98-5 CAPLUS  
 CN Benzeneethanamine,  $\alpha, \alpha'$ -[dithiobis(methylene)]bis- (9CI) (CA INDEX NAME)



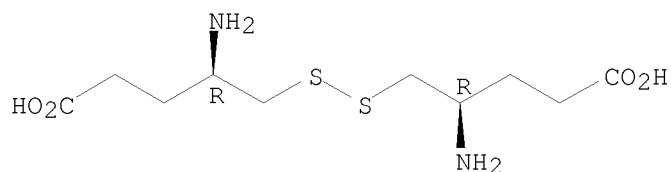
RN 156143-32-7 CAPLUS  
 CN Pentanoic acid, 5,5'-dithiobis[4-amino-, [S-(R\*,R\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



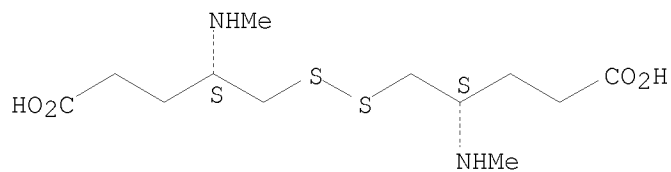
RN 156143-38-3 CAPLUS  
 CN Pentanoic acid, 5,5'-dithiobis[4-amino-, [R-(R\*,R\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

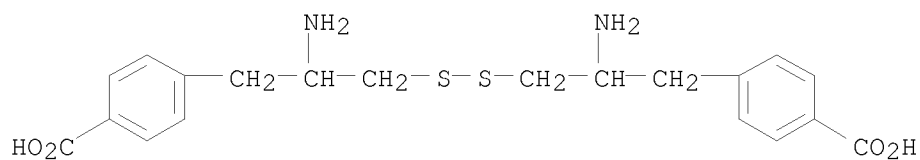


RN 156143-44-1 CAPLUS  
 CN Pentanoic acid, 5,5'-dithiobis[4-(methlamino)-, [S-(R\*,R\*)]- (9CI) (CA INDEX NAME)

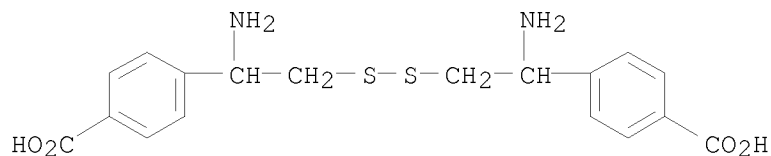
Absolute stereochemistry.



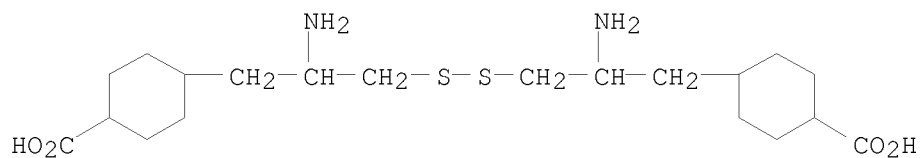
RN 156143-66-7 CAPLUS  
 CN Benzoic acid, 4,4'-[dithiobis(2-amino-1,3-propanediyl)]bis- (9CI) (CA INDEX NAME)



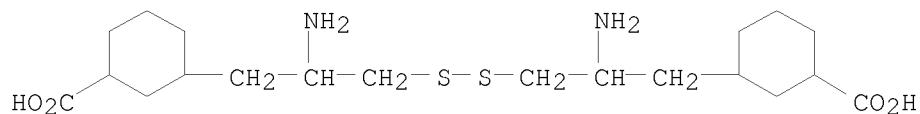
RN 156143-84-9 CAPLUS  
 CN Benzoic acid, 4,4'-[dithiobis(1-amino-2,1-ethanediyl)]bis- (9CI) (CA INDEX NAME)



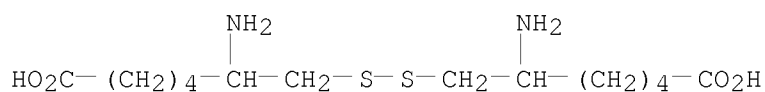
RN 156144-06-8 CAPLUS  
 CN Cyclohexanecarboxylic acid, 4,4'-[dithiobis(2-amino-1,3-propanediyl)]bis- (9CI) (CA INDEX NAME)



RN 156144-15-9 CAPLUS  
 CN Cyclohexanecarboxylic acid, 3,3'-[dithiobis(2-amino-1,3-propanediyl)]bis- (9CI) (CA INDEX NAME)



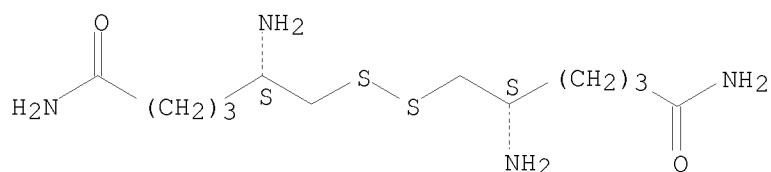
RN 162954-89-4 CAPLUS  
 CN Heptanoic acid, 7,7'-dithiobis[6-amino- (9CI) (CA INDEX NAME)



RN 213488-07-4 CAPLUS  
 CN Hexanamide, 6,6'-dithiobis[5-amino-, (5S,5'S)- (9CI) (CA INDEX NAME)

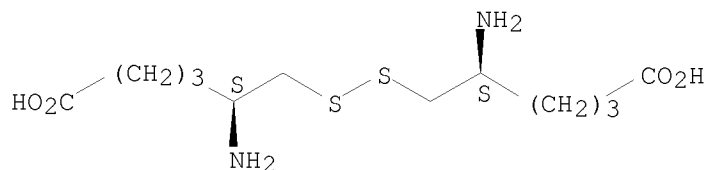
Absolute stereochemistry.





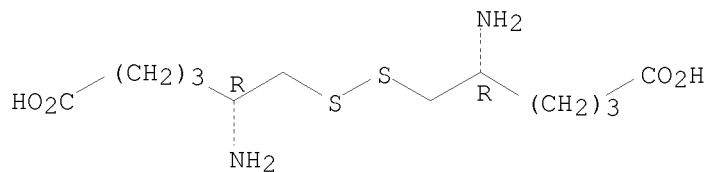
RN 213488-08-5 CAPLUS  
 CN Hexanoic acid, 6,6'-dithiobis[5-amino-, (5S,5'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



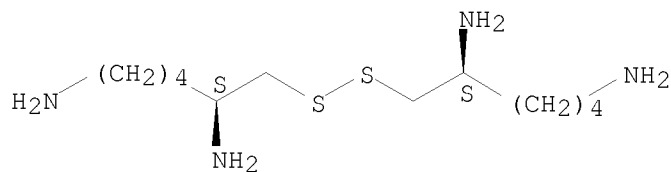
RN 213488-09-6 CAPLUS  
 CN Hexanoic acid, 6,6'-dithiobis[5-amino-, (5R,5'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

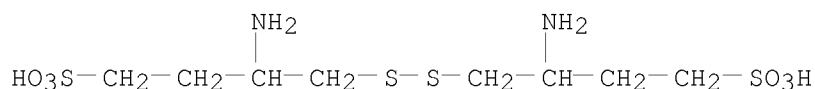


RN 213488-10-9 CAPLUS  
 CN 1,5-Hexanediamine, 6,6'-dithiobis-, (5S,5'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



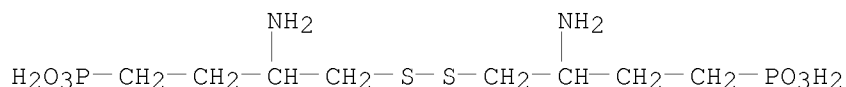
RN 213488-11-0 CAPLUS  
 CN 1-Butanesulfonic acid, 4,4'-dithiobis[3-amino-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

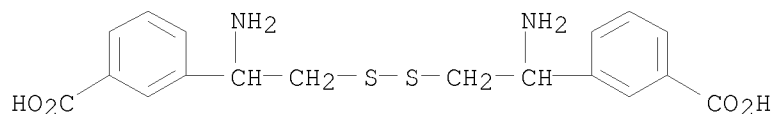
RN 213488-12-1 CAPLUS  
 CN Phosphonic acid, [dithiobis(3-amino-4,1-butanediyl)]bis- (9CI) (CA INDEX NAME)

NAME)



RN 213488-13-2 CAPLUS

CN Benzoic acid, 3,3'-[dithiobis(1-amino-2,1-ethanediyl)]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 34 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:499492 CAPLUS

DOCUMENT NUMBER: 129:260731

ORIGINAL REFERENCE NO.: 129:53144h,53145a

TITLE: Template Oligomerization of DNA-Bound Cations Produces Calibrated Nanometric Particles

AUTHOR(S): Blessing, Thomas; Remy, Jean-Serge; Behr, Jean-Paul

CORPORATE SOURCE: Laboratoire de Chimie Genetique associe  
CNRS/Universite Louis Pasteur de Strasbourg (UMR 7514)  
Faculte de Pharmacie, Illkirch, 67401, Fr.

SOURCE: Journal of the American Chemical Society (1998),  
120(33), 8519-8520

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A general approach to the monomol. condensation of DNA into stable nano-metric particles is reported, which may be extended to the design of any kind of calibrated nano-metric particles required for material sciences. The process takes advantage of the low cooperativity of binding small monomeric counterions to a macromol. polyion, followed by a zipper-oligomerization reaction which "freezes" the resulting condensed particles. The DNA particles have a neg. surface charge which ensures colloid stability and in vivo diffusion, yet makes them unsuitable for carrying DNA into cells. Thus, C-sper-C [cysteine-spermine-cysteine (I)] was synthesized and mixed with plasmid DNA, which was found to enhance the thiol oxidation rates in the thiol/disulfide oligomerization, which resulted in condensation of the DNA into particles of mean size 50 ± 15 nm, which were stable ≥1 wk. The condensed particles were stable in electrophoresis conditions, but addition of excess dithiothreitol or raising the ionic concentration to physiol. levels converted the cationic polymer back

to

I.

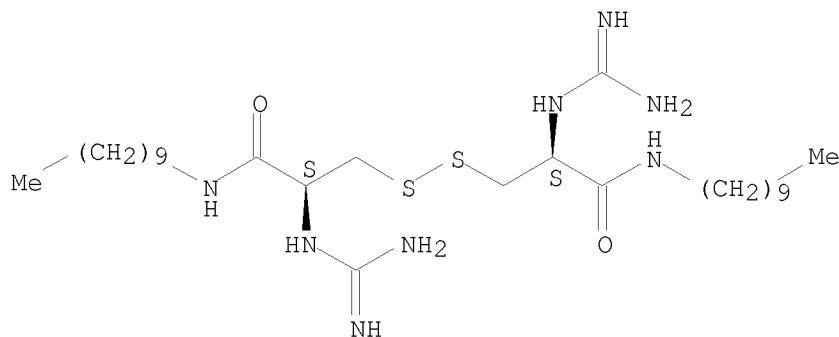
IT 213468-24-7DP, DNA complex

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(template oligomerization of DNA-bound cations produces calibrated nano-metric particles)

RN 213468-24-7 CAPLUS

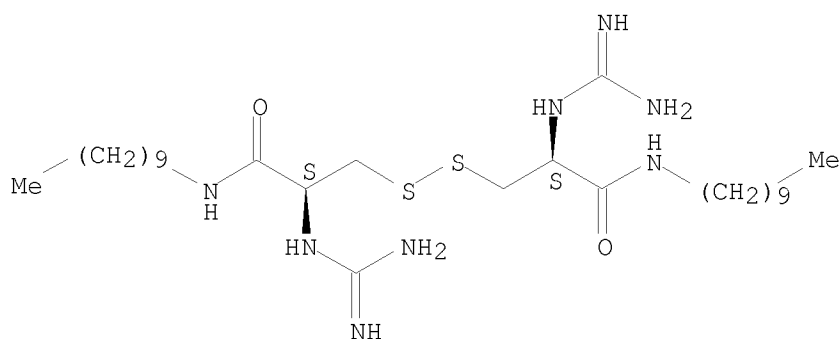
CN Propanamide, 3,3'-dithiobis[2-[(aminoiminomethyl)amino]-N-decyl-,  
(2S,2'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 213468-24-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(template oligomerization of DNA-bound cations produces calibrated nano-metric particles)  
RN 213468-24-7 CAPLUS  
CN Propanamide, 3,3'-dithiobis[2-[(aminoiminomethyl)amino]-N-decyl-, (2S,2'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 35 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:481387 CAPLUS  
DOCUMENT NUMBER: 129:231004  
ORIGINAL REFERENCE NO.: 129:47011a,47014a  
TITLE: Chemical pathways of peptide degradation: IX.  
Metal-catalyzed oxidation of histidine in model peptides  
AUTHOR(S): Khossravi, Mehrnaz; Borchardt, Ronald T.  
CORPORATE SOURCE: Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS, 66047, USA  
SOURCE: Pharmaceutical Research (1998), 15(7), 1096-1102  
CODEN: PHREEB; ISSN: 0724-8741  
PUBLISHER: Plenum Publishing Corp.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB To elucidate the nature of the reactive oxygen species (i.e., superoxide anion radical, hydroxyl radical, and hydrogen peroxide) involved in the metal-catalyzed oxidation of histidine (His) in two model peptides. The degrdns. of Ac-Ala-His-Val-NH<sub>2</sub> (Ala-peptide) and [Ac-Cys-NH<sub>2</sub>]-S-S-[Ac-Cys-

His-Val-NH<sub>2</sub>] (Cys-peptide, disulfide bond containing) were investigated at pHs 5.3 and 7.4 in an ascorbate/cupric chloride/oxygen [ascorbate/Cu(II)/O<sub>2</sub>] system, both in the absence and presence of selective scavengers (i.e., catalase, superoxide dismutase, mannitol, sodium formate, isopropanol, and thiourea) of the reactive oxygen species. All reactions were monitored by HPLC, and the major degradation products were characterized by electrospray mass spectrometry. The Cys-peptide was more stable than the Ala-peptide at pH 5.3 and 7.4. Both peptides displayed greater stability at pH 5.3 than at 7.4. At pH 5.3, 35 ± 0.7% of the Cys-peptide and 18 ± 1% of the Ala-peptide remained after 7 h, whereas at pH 7.4, 16 ± 3% of the Cys-peptide and 4 ± 1% of the Ala-peptide remained. Catalase, thiourea, bicinchoninic acid, and ethylenediaminetetraacetate were effective at stabilizing both peptides toward oxidation, while superoxide dismutase, mannitol, isopropanol, and sodium formate were ineffective. The main degradation products of the Ala- and Cys-peptides at pH 7.4 appeared to be Ac-Ala-2-oxo-His-Val-NH<sub>2</sub> and [Ac-Cys-NH<sub>2</sub>]-S-S-[Ac-Cys-2-oxo-His-Val-NH<sub>2</sub>]. Hydrogen peroxide, Cu(I), and superoxide anion radical were deduced to be intermediates involved in the oxidation of the Ala- and Cys-peptides. Hydrogen peroxide degradation to secondary reactive oxygen species may have led to the oxidation of the peptides. The degradation of hydrogen peroxide by

a

Fenton-type reaction was speculated to form a complexed form of hydroxyl radical that reacts with the peptide before diffusion into the bulk solution

IT 212714-54-0

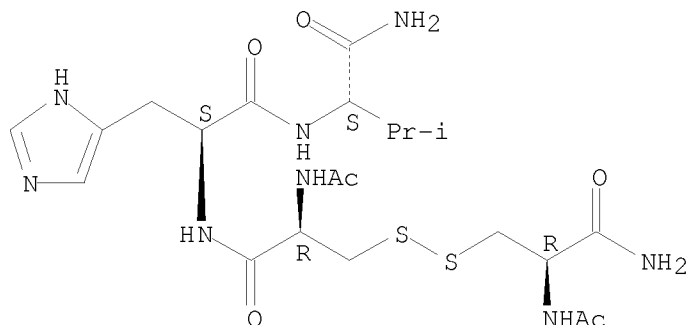
RL: RCT (Reactant); RACT (Reactant or reagent)

(study of the copper-catalyzed oxidation of histidine in peptides)

RN 212714-54-0 CAPLUS

CN L-Valinamide, N-acetyl-3-[[ (2R)-2-(acetylamino)-3-amino-3-oxopropyl]dithio]-L-alanyl-L-histidyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 212714-56-2P

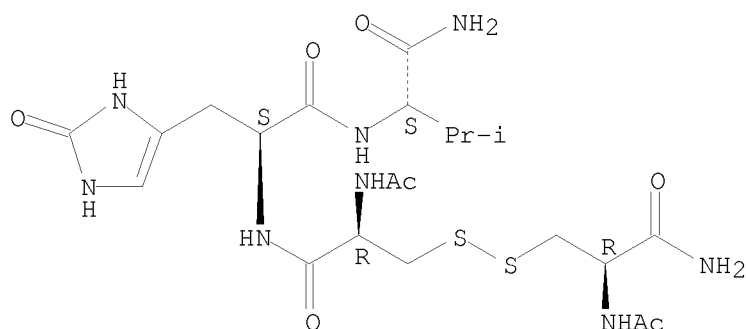
RL: SPN (Synthetic preparation); PREP (Preparation)

(study of the copper-catalyzed oxidation of histidine in peptides)

RN 212714-56-2 CAPLUS

CN L-Valinamide, N-acetyl-3-[[ (2R)-2-(acetylamino)-3-amino-3-oxopropyl]dithio]-L-alanyl-3-(2,3-dihydro-2-oxo-1H-imidazol-4-yl)-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 36 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:478949 CAPLUS  
 DOCUMENT NUMBER: 129:117865  
 ORIGINAL REFERENCE NO.: 129:24029a  
 TITLE: Methods and articles of manufacture for treating nicotine withdrawal symptoms, for nicotine cessation, and for monitoring nicotine use  
 INVENTOR(S): Eswara, Amruta R.; Muni, Neal; Schneider, F. Howard; Mione, Peter J.  
 PATENT ASSIGNEE(S): DynaGen, Inc., USA  
 SOURCE: U.S., 23 pp., Cont.-in-part of U.S. Ser. No. 487,853, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 7  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5780051	A	19980714	US 1997-779281	19970122
US 5403595	A	19950404	US 1993-135847	19931013
US 5414005	A	19950509	US 1993-145203	19931028
US 5536503	A	19960716	US 1995-415859	19950403
PRIORITY APPLN. INFO.:			US 1992-862051	B3 19920402
			US 1992-881740	A2 19920507
			US 1993-135847	A3 19931013
			US 1993-137687	B3 19931015
			US 1993-145203	A3 19931028
			US 1994-279619	A3 19940725
			US 1995-415859	A3 19950403
			US 1995-487853	B2 19950607
			US 1991-696637	B2 19910507

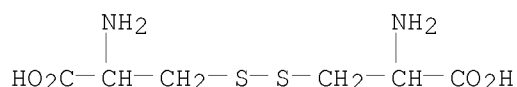
AB The present invention features methods and articles of manufacture for treating nicotine withdrawal symptoms and promoting smoking cessation. The methods and articles feature the administration of an effective amount of a nicotine substitute and monitoring the presence of nicotine in the biol. sample of the subject with a nicotine detection system.

IT 923-32-0, Cystine 923-32-0D, Cystine, analogs  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

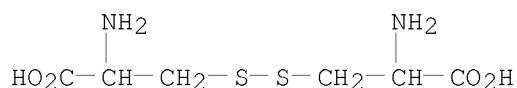
(methods and articles of manufacture for treating nicotine withdrawal symptoms, for nicotine cessation, and for monitoring nicotine use)

RN 923-32-0 CAPLUS

CN Cystine (CA INDEX NAME)



RN 923-32-0 CAPLUS  
CN Cystine (CA INDEX NAME)



REFERENCE COUNT: 125 THERE ARE 125 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L27 ANSWER 37 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:476942 CAPLUS

DOCUMENT NUMBER: 129:240142

ORIGINAL REFERENCE NO.: 129:48739a, 48742a

TITLE: New GnRH-like peptide construct to optimize efficient immunocastration of male pigs by immunoneutralization of GnRH

AUTHOR(S): Oonk, H. B.; Turkstra, J. A.; Schaaper, W. M. M.; Erkens, J. H. F.; Weerd, M. H. Schuitemaker-De; Van Nes, A.; Verheijden, J. H. M.; Meloen, R. H.

CORPORATE SOURCE: Department of Molecular Recognition ID-DLO Institute for Animal Science and Health, Lelystad, 8219 PH, Neth.

SOURCE: Vaccine (1998), 16(11/12), 1074-1082

CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Castration of male pigs is routinely performed to prevent the occurrence of boar taint in pig carcasses. However, boar taint can also be eliminated by immunol. castration using a synthetic peptide vaccine against GnRH. For pig farming, to make immunocastration a feasible alternative method to surgical castration, the composition of the vaccine has to be not only reliable and effective but also cost-efficient and safe. Previously the authors have developed an effective immunocastration vaccine by replacing the monomer GnRH by a much more immunogenic tandem peptide. However, this tandem-GnRH vaccine preparation needs Complete Freund's adjuvant and to be applied at a relatively high dose. Therefore, alternative antigens were designed to cope with this problem and tested with different adjuvants and dosages. An effective new antigen was designed based on a GnRH-tandem peptide, which was dimerized and modified in one amino acid position of the decapeptide to allow conjugation of this tandem-dimer to ovalbumin. In mild adjuvants and in low dosage, this antigen was very effective in reducing testis weight, serum LH and androstene level in backfat. Thus, an improved immunocastration vaccine has been designed that is relatively cost-efficient and highly efficacious in two vaccinations at low dose.

IT 104282-73-7 213130-47-3 213130-50-8  
213130-51-9 213130-52-0

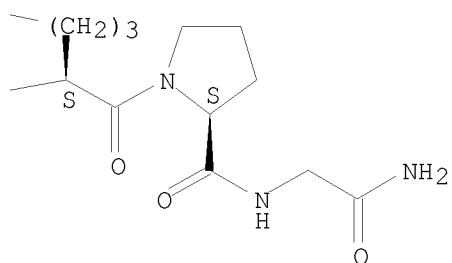
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)

(new GnRH-like peptide construct to optimize efficient immunocastration

Absolute stereochemistry.

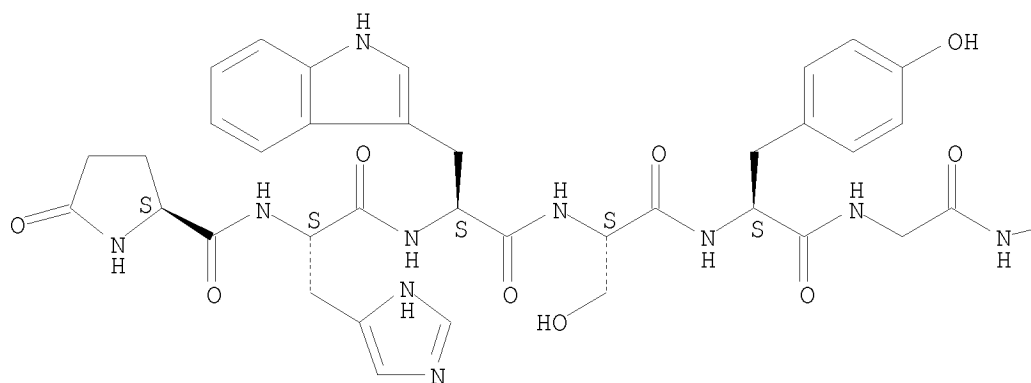
The chemical structure shows a long-chain cyclic peptide. The backbone consists of a repeating sequence of amide bonds. Key features include:
 

- A thiazolidine ring (a five-membered ring containing one nitrogen and one sulfur atom) attached to the chain.
- A guanidino group (H<sub>2</sub>N-C(=NH)-NH-) attached to the chain.
- A side chain containing a (CH<sub>2</sub>)<sub>4</sub> group and an amino group (NH<sub>2</sub>).
- A side chain containing a hydroxyl group (OH).
- A side chain containing a 4-hydroxyphenyl group (a benzene ring with a para-hydroxyl group).
- A side chain containing an isobutyl group (i-Bu).

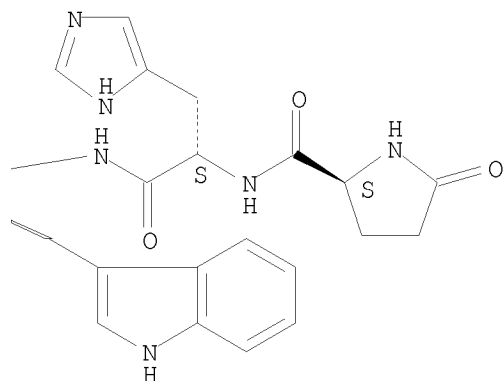
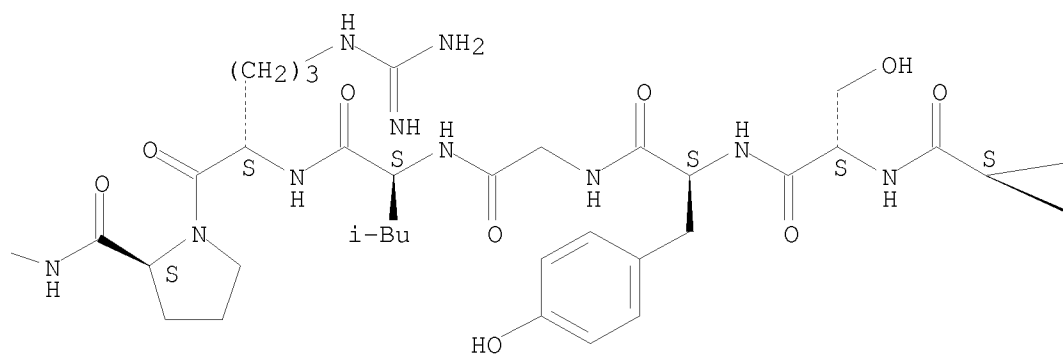
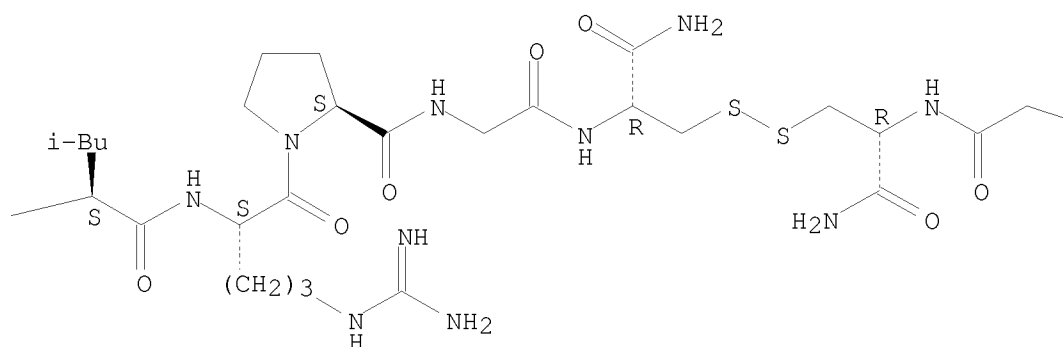


RN 213130-47-3 CAPLUS  
 CN Luteinizing hormone-releasing factor (swine), 10a-L-cysteinamide-, bimol.  
 (10a→10'a)-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



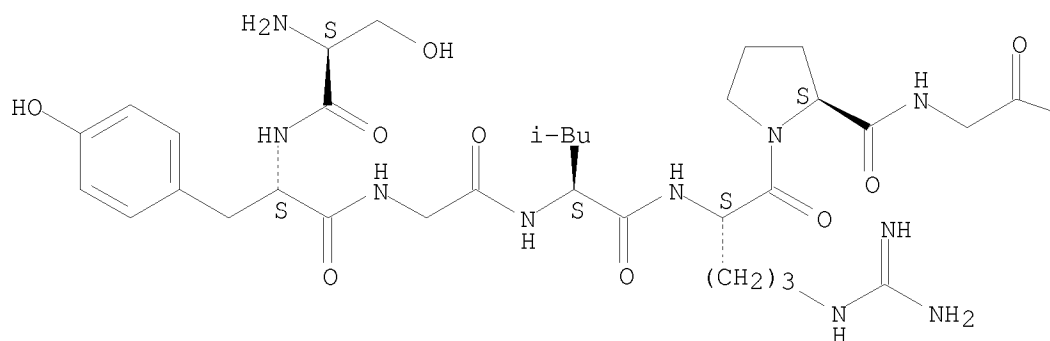




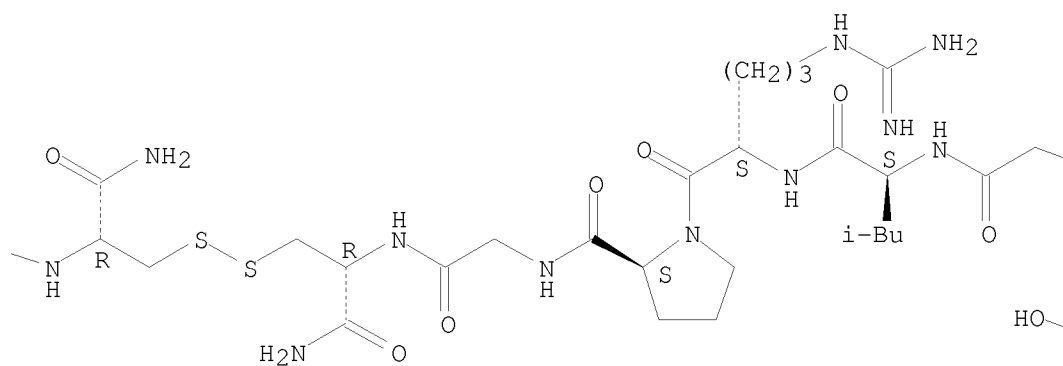
RN 213130-50-8 CAPLUS  
 CN 4-10-Luteinizing hormone-releasing factor (swine), 10a-L-cysteinamide-,  
 bimol. (10a→10'a)-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

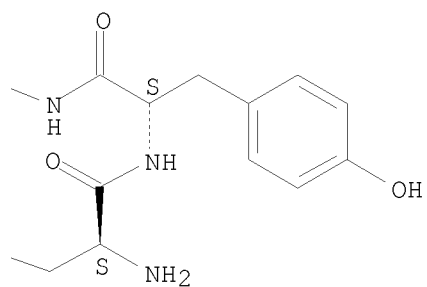
PAGE 1-A



PAGE 1-B



PAGE 1-C

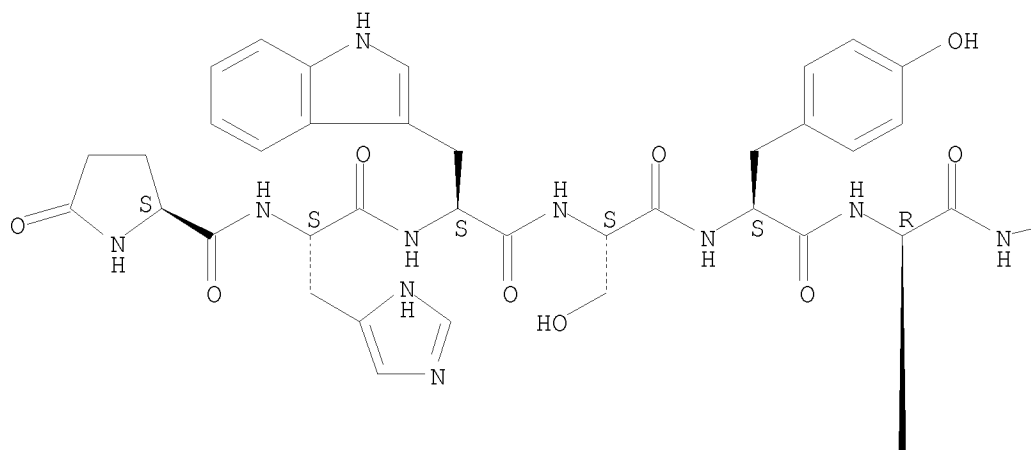


RN 213130-51-9 CAPLUS  
 CN Luteinizing hormone-releasing factor (swine), 6-[3-(2-naphthalenyl)-D-

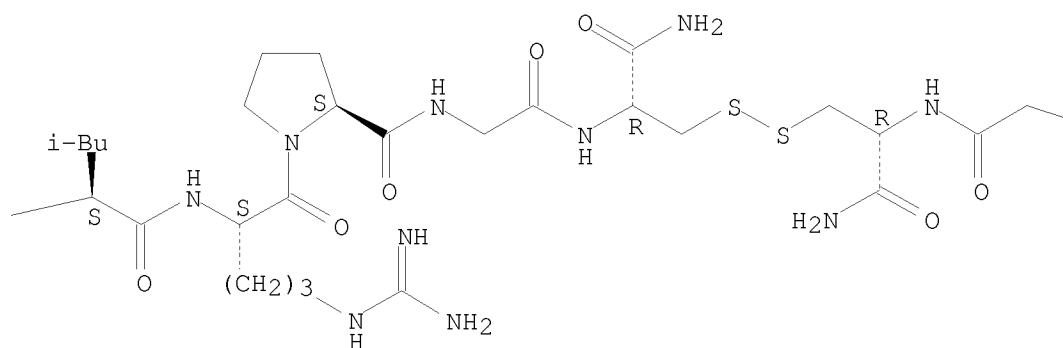
alanine]-10a-L-cysteinamide-, bimol. (10a→10'a)-disulfide (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

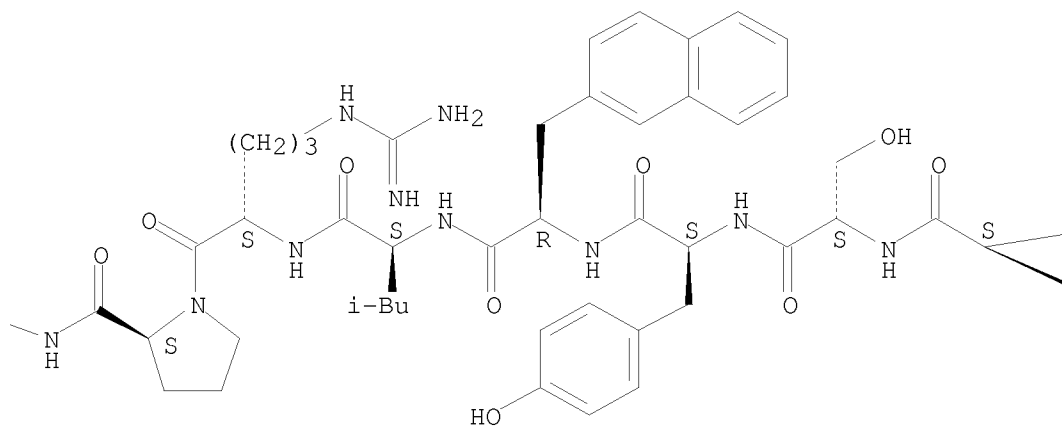
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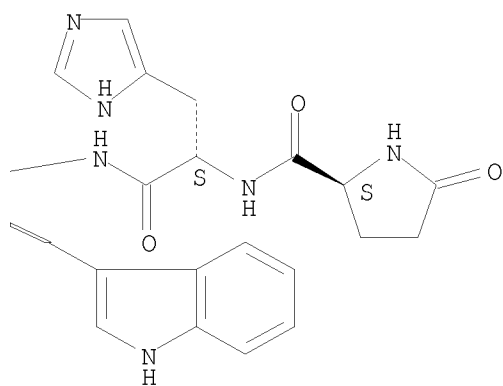
PAGE 1-B



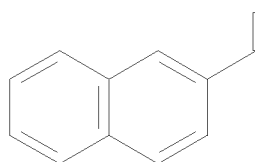
PAGE 1-C



PAGE 1-D

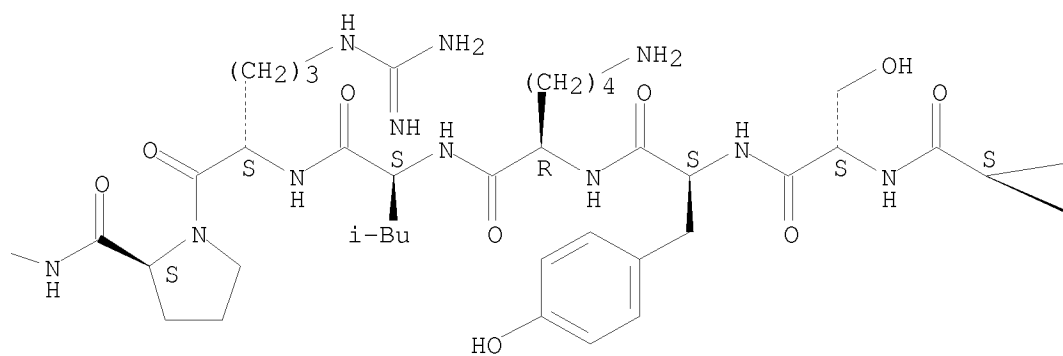
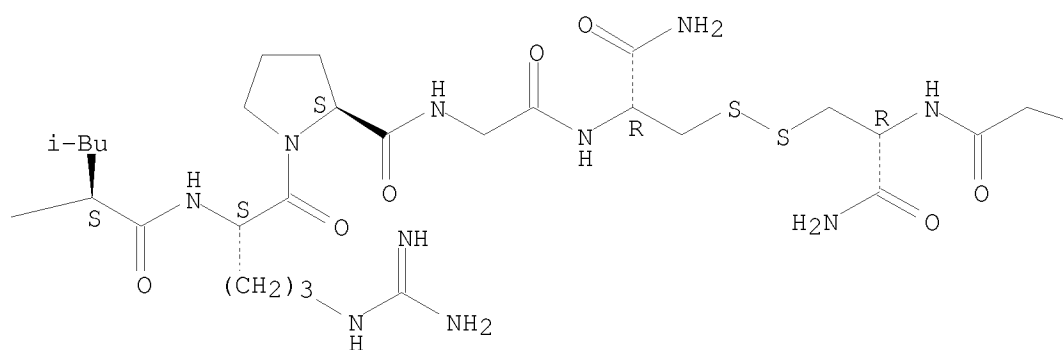
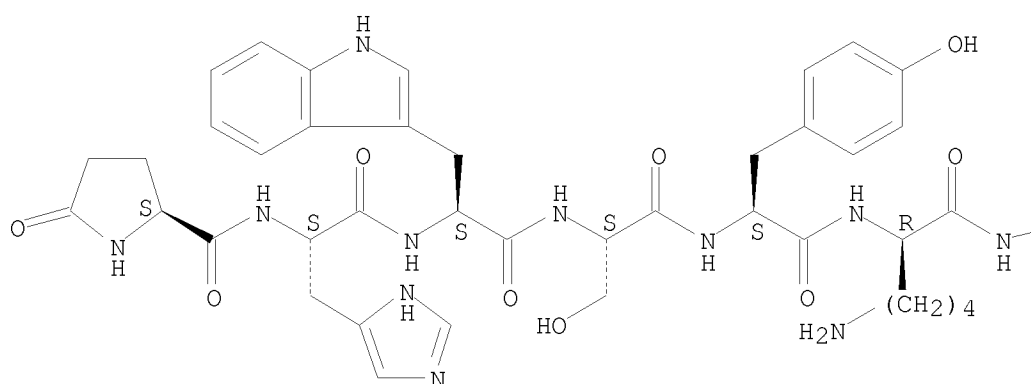


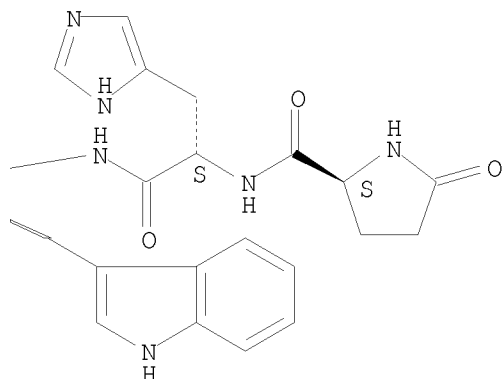
PAGE 2-A



RN 213130-52-0 CAPLUS  
CN Luteinizing hormone-releasing factor (swine), 6-D-lysine-10a-L-cysteinamide-, bimol. (10a→10'a)-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.





REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 38 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:464193 CAPLUS

DOCUMENT NUMBER: 129:216895

ORIGINAL REFERENCE NO.: 129:44099a, 44102a

TITLE: Synthesis and activity of dimeric bradykinin antagonists containing diaminodicarboxylic acid bridge residues

AUTHOR(S): Lange, Meinolf; Cuthbertson, Alan S.; Towart, Robertson; Fischer, Peter M.

CORPORATE SOURCE: Nycomed Pharma AS, Oslo, Norway

SOURCE: Journal of Peptide Science (1998), 4(4), 289-293

CODEN: JPSIEI; ISSN: 1075-2617

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Enhancement of a ligand's interaction with a receptor through presenting the ligand in multimeric form is a topic of general interest. Thus dimerization of single-chain bradykinin antagonist peptides has previously been shown to be beneficial in terms of potency and duration of action. While crosslinking polypeptides at terminal positions using suitable dicarboxylic acids and diamines is comparatively straight-forward synthetically, internal dimerizations are usually achieved through oxidation or double S-alkylations of cysteine residues, resulting in metabolically unfavorable disulfide and thioether cross-links. Using suitably modified standard solid-phase peptide synthesis protocols, dimeric bradykinin antagonist peptides [H-D-Arg-Arg-Pro-Hyp-Gly-Phe]2-X-[D-Phe-Leu-Arg-OH]2 were synthesized where X corresponds to a L,L-2,7-diaminosuberic or L,L-2,9-diaminosebacic acid residue, resp. The biol. activity of these peptides was comparable to that of conventional dimeric bradykinin antagonists cross-linked through cystine or bis(succinimido)alkyl bridges.

IT 140661-98-9P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

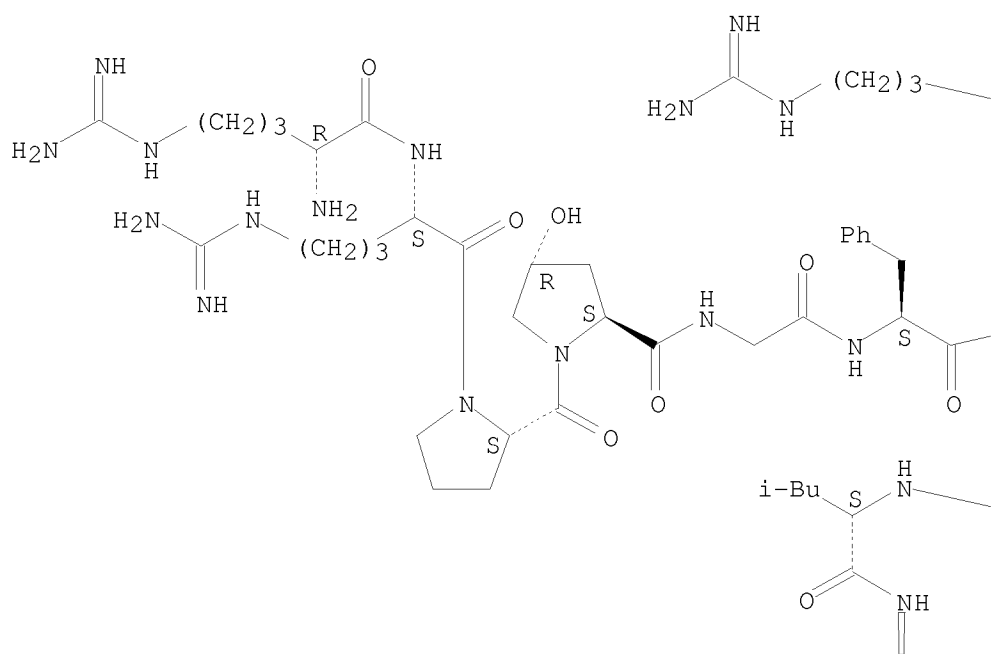
(synthesis and activity of dimeric bradykinin antagonists)

RN 140661-98-9 CAPLUS

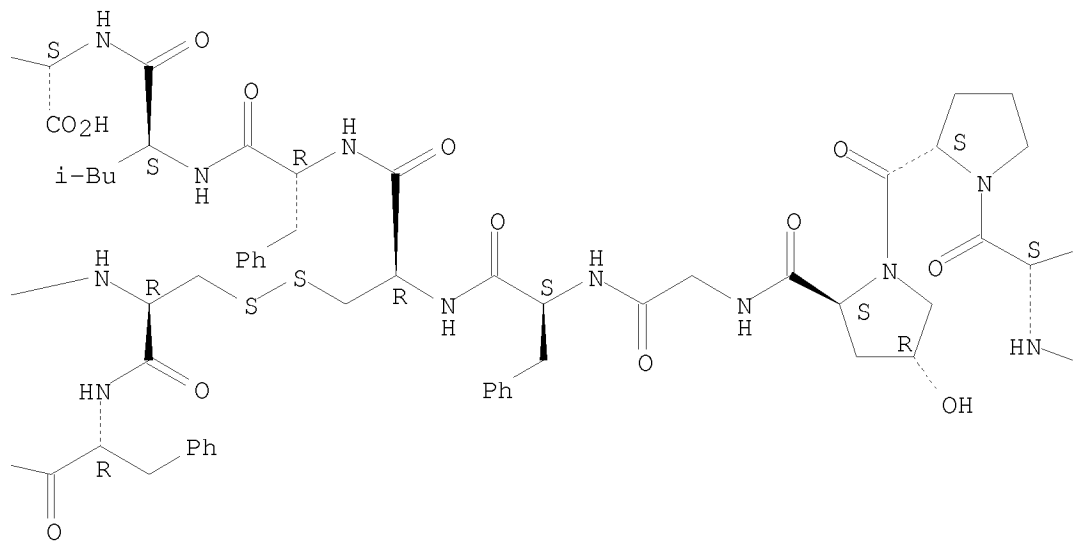
CN L-Arginine, D-arginyl-L-arginyl-L-prolyl-(4R)-4-hydroxy-L-prolylglycyl-L-phenylalanyl-L-cysteinyl-D-phenylalanyl-L-leucyl-, bimol. (7→7')-disulfide (9CI) (CA INDEX NAME)

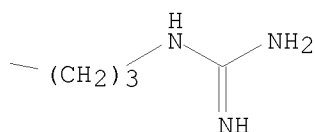
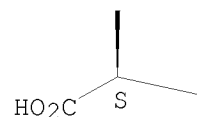
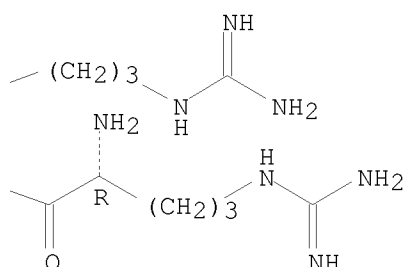
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B





REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

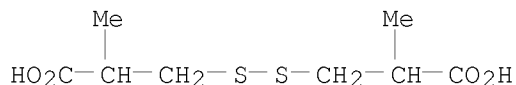
L27 ANSWER 39 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:463036 CAPLUS  
 DOCUMENT NUMBER: 129:216279  
 ORIGINAL REFERENCE NO.: 129:43970h, 43971a  
 TITLE: Unexpected formation of 1,2-dithiolan-3-one by oxidation of 3-acetylthio-2-methylpropanoic acid with thionyl chloride  
 AUTHOR(S): Lee, Hee Bong; Kim, Young Gyu  
 CORPORATE SOURCE: School of Chemical Engineering, Seoul National University, Seoul, 151-742, S. Korea  
 SOURCE: Journal of Industrial and Engineering Chemistry (Seoul) (1998), 4(2), 127-134  
 CODEN: JIECFI; ISSN: 1226-086X  
 PUBLISHER: Korean Society of Industrial and Engineering Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB An unexpected oxidation reaction of 3-acetylthio-2-methylpropanoic acid (I) with thionyl chloride occurred to give 4-methyl-1,2-dithiolan-3-one (II) and 4-methyl-1,2-dithiolan-3-one (III) in the course of the synthesis of  $\alpha$ -methyl- $\beta$ -propiolactone. It was proposed that III was

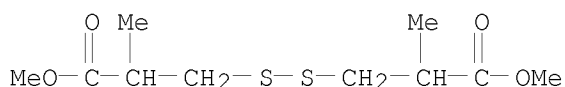


derived from II based on the literature precedents. In an effort to explain the formation of II and III, two stable intermediates, disulfide dicarboxylate and trisulfide dicarboxylate, were isolated from the reaction mixture. The oxidation reaction of a thioester or thiol group with thionyl chloride seemed unknown and it was proposed that a chlorothiosulfite be the initial intermediate in the oxidation reaction.

IT 33325-42-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (oxidation of (acetylthio)methylpropanoic acid with thionyl chloride)  
 RN 33325-42-7 CAPLUS  
 CN Propanoic acid, 3,3'-dithiobis[2-methyl- (9CI) (CA INDEX NAME)



IT 25055-41-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (oxidation of (acetylthio)methylpropanoic acid with thionyl chloride)  
 RN 25055-41-8 CAPLUS  
 CN Propanoic acid, 3,3'-dithiobis[2-methyl-, dimethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 40 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:440867 CAPLUS

DOCUMENT NUMBER: 129:211860

ORIGINAL REFERENCE NO.: 129:42883a,42886a

TITLE: Effect of arginine vasopressin AVP(4-8) on CaMKII autophosphorylation and CaM expression in rat brain

AUTHOR(S): Qiao, Li-Ya; Chen, Xiu-Fang; Gu, Ben-Xian; Du, Yu-Cang  
 CORPORATE SOURCE: Shanghai Institute of Biochemistry, Chinese Academy of Sciences, Shanghai, 200031, Peop. Rep. China

SOURCE: Peptides: Biology and Chemistry, Proceedings of the Chinese Peptide Symposium, 4th, Chengdu, Peop. Rep. China, July 21-25, 1996 (1998), Meeting Date 1996, 184-186. Editor(s): Xu, Xiao-Jie; Ye, Yun-Hua; Tam, James P. Kluwer: Dordrecht, Neth.  
 CODEN: 66KJAP

DOCUMENT TYPE: Conference

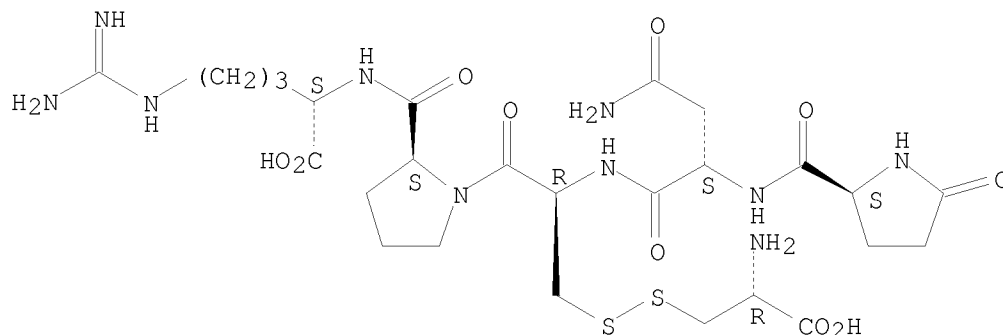
LANGUAGE: English

AB The relation between the induction of long-term potentiation by AVP(4-8) and changes in CaM levels and CaMKII activity in the rat brain were investigated. Both CaM levels and CaMKII activity were increased following AVP(4-8) administration. Since the enhancement of CaM expression may replenish the CaM pool and maintain high activities of CaMKII and /or other CaM-coupled enzymes, the sustained activation of CaMKII would lead to the enhancement of synaptic transmitter release and the LTP phenomena following AVP(4-8) administration.

IT 87558-80-3  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

RN 87558-80-3 CAPLUS

Absolute stereochemistry.



L27 ANSWER 41 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:440866 CAPLUS

DOCUMENT NUMBER: 129:211859

ORIGINAL REFERENCE NO.: 129:42883a, 42886a

TITLE: Involvement of a G-protein coupled receptor (GPCR) in signal transduction induced by arginine-vasopressin(4-8)

AUTHOR(S) : Qiao, Li-Ya; Du, Yu-Cang

CORPORATE SOURCE: Shanghai Institute of Biochemistry, Chinese Academy of Sciences, Shanghai, 200031, Peop. Rep. China

SOURCE: Peptides: Biology and Chemistry, Proceedings of the Chinese Peptide Symposium, 4th, Chengdu, Peop. Rep. China, July 21-25, 1996 (1998), Meeting Date 1996, 181-183. Editor(s): Xu, Xiao-Jie; Ye, Yun-Hua; Tam, James P. Kluwer: Dordrecht, Neth.

CODEN: 66KJAP

DOCUMENT TYPE: Conference

LANGUAGE: English

AB In order to study the receptor that may be involved in long-term potentiation (LTP) process stimulation by AVP(4-8) and the signaling pathway, changes of MAPK activity and Ca<sup>2+</sup>/CaM-dependent protein kinase II (CaMKII) autophosphorylation influenced by ZDC(C)PR, pertussis toxin, etc. were estimated and their significance discussed. In brief, the authors' data clearly demonstrate the existence of a pertussis toxin-sensitive G protein, which mediates both mitogenic signaling pathway and CaMKII-LTP induced by AVP(4-8) and the receptor of AVP(4-8) in rat hippocampus should be coupled to Go instead of Gi (activating MAPK not through PKC) or Gq (PTX-insensitive protein).

IT 87558-80-3

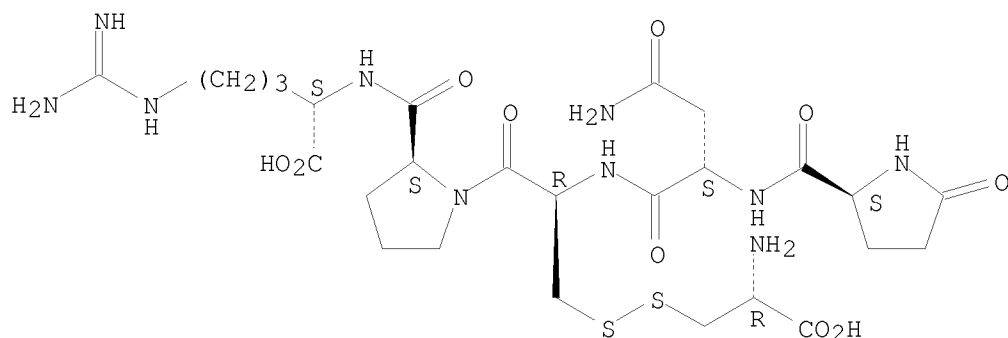
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(involvement of a G-protein coupled receptor (GPCR) in signal transduction induced by arginine-vasopressin(4-8))

RN 87558-80-3 CAPLUS

CN L-Arginine, 5-oxo-L-prolyl-L-asparaginyl-L-cysteinyl-L-prolyl-, disulfide  
with L-cysteine (9CI) (CA INDEX NAME)

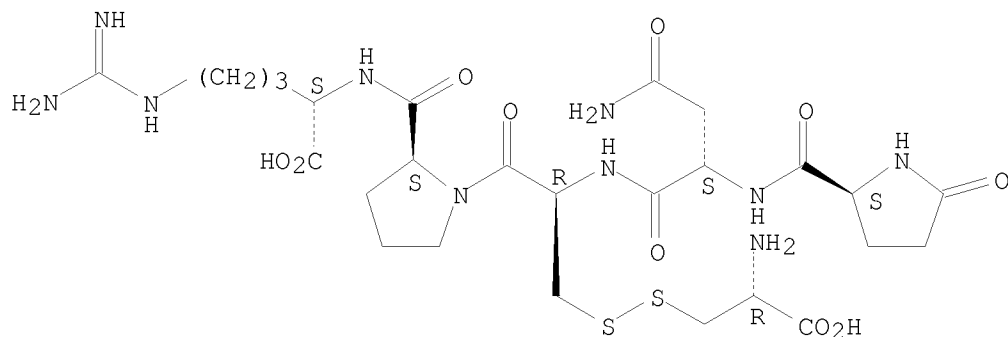
Absolute stereochemistry.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 42 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:440865 CAPLUS  
 DOCUMENT NUMBER: 129:211858  
 ORIGINAL REFERENCE NO.: 129:42883a, 42886a  
 TITLE: Enhancement of MAPK activity in rat brain following AVP(4-8) administration  
 AUTHOR(S): Qiao, Li-Ya; Du, Yu-Cang  
 CORPORATE SOURCE: Shanghai Institute of Biochemistry, Chinese Academy of Sciences, Shanghai, 200031, Peop. Rep. China  
 SOURCE: Peptides: Biology and Chemistry, Proceedings of the Chinese Peptide Symposium, 4th, Chengdu, Peop. Rep. China, July 21-25, 1996 (1998), Meeting Date 1996, 178-180. Editor(s): Xu, Xiao-Jie; Ye, Yun-Hua; Tam, James P. Kluwer: Dordrecht, Neth.  
 CODEN: 66KJAP  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English  
 AB AVP(4-8) administration to rats increased MAPK activity in the hippocampus. Immunoblot assay with anti-ERKI or anti-ERKII polyclonal antibody indicated that the kinase was p44ERK. Further studies indicated that the increase in p44ERK activity was through a short-period activation process caused by protein phosphorylation but not by protein expression.  
 IT 87558-80-3  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (enhancement of MAPK activity in rat brain following AVP(4-8) administration)  
 RN 87558-80-3 CAPLUS  
 CN L-Arginine, 5-oxo-L-prolyl-L-asparaginyl-L-cysteinyl-L-prolyl-, disulfide with L-cysteine (9CI) (CA INDEX NAME)

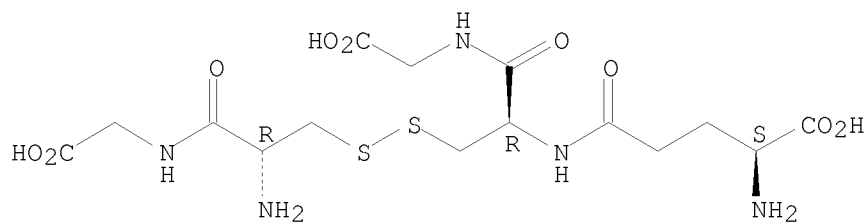
Absolute stereochemistry.



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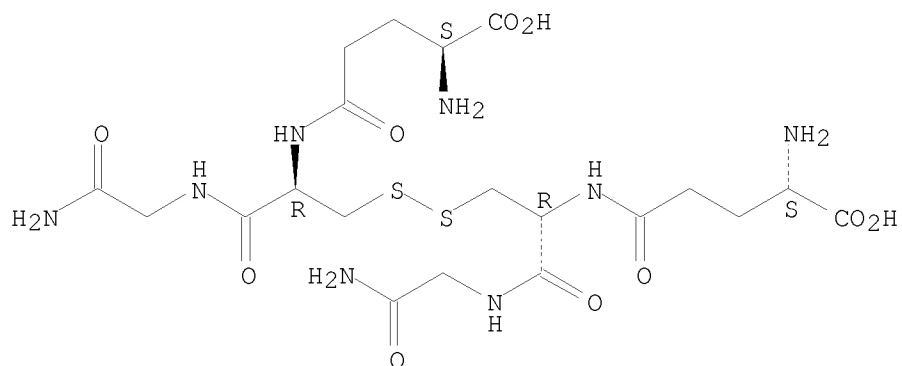
L27 ANSWER 43 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:440860 CAPLUS  
DOCUMENT NUMBER: 129:207077  
ORIGINAL REFERENCE NO.: 129:41967a, 41970a  
TITLE: Isolation and synthesis of a group of  
N- $\gamma$ -glutamyl oligopeptides from Panax ginseng  
AUTHOR(S): Fan, Chong-Xu; Ye, Yun-Hua; Chen, Zhi-Kua; Jiang, Qin;  
Yang, Liu; Xing, Qi-Yi  
CORPORATE SOURCE: Department of Chemistry, Peking University, Beijing,  
100871, Peop. Rep. China  
SOURCE: Peptides: Biology and Chemistry, Proceedings of the  
Chinese Peptide Symposium, 4th, Chengdu, Peop. Rep.  
China, July 21-25, 1996 (1998), Meeting Date 1996,  
166-168. Editor(s): Xu, Xiao-Jie; Ye, Yun-Hua; Tam,  
James P. Kluwer: Dordrecht, Neth.  
CODEN: 66KJAP  
DOCUMENT TYPE: Conference  
LANGUAGE: English  
AB Six oligopeptides were isolated from Panax ginseng and found to have  
 $\gamma$ -glutamate N-terminals. Five of the peptides contain cystine.  
Their structures, which are shown, were confirmed by synthesis.  
IT 70555-25-8P 82153-41-1P 90663-73-3P  
212003-71-9P  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PNU  
(Preparation, unclassified); PRP (Properties); BIOL (Biological study);  
OCCU (Occurrence); PREP (Preparation)  
(isolation and synthesis of a group of N- $\gamma$ -glutamyl oligopeptides  
from Panax ginseng)  
RN 70555-25-8 CAPLUS  
CN Glycine, L- $\gamma$ -glutamyl-L-cysteinyl-, (2 $\rightarrow$ 1')-disulfide with  
L-cysteinylglycine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 82153-41-1 CAPLUS  
CN Glycinamide, L- $\gamma$ -glutamyl-L-cysteinyl-, bimol. (2 $\rightarrow$ 2')-  
disulfide (9CI) (CA INDEX NAME)

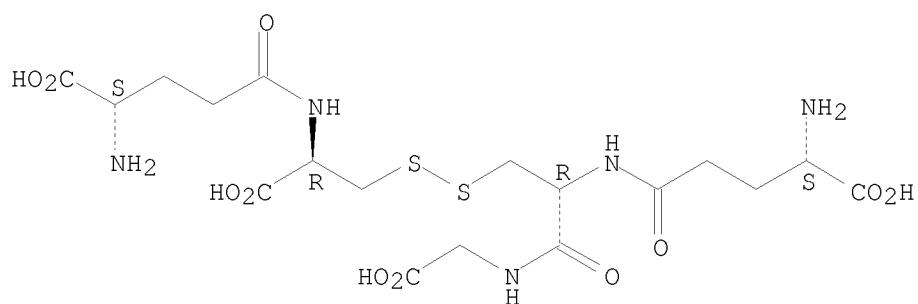
Absolute stereochemistry.



RN 90663-73-3 CAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl-, (2→2')-disulfide with  
L-γ-glutamyl-L-cysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

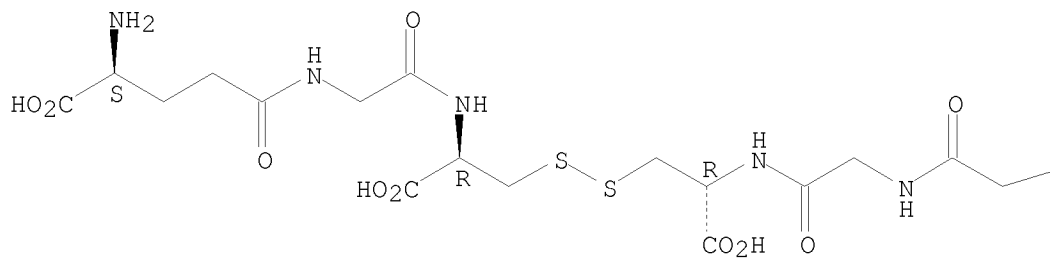


RN 212003-71-9 CAPLUS

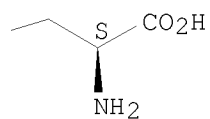
CN L-Cysteine, L-γ-glutamylglycyl-, bimol. (3→3')-disulfide  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 44 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:439232 CAPLUS

DOCUMENT NUMBER: 129:198224

ORIGINAL REFERENCE NO.: 129:40123a, 40126a

TITLE: Effect of AVP(4-8) administration on Ca<sup>2+</sup>/CaM-dependent protein kinase II autophosphorylation in rat brain

AUTHOR(S): Qiao, Li-Ya; Chen, Xiu-Fang; Gu, Ben-Xian; Wang, Tong-Xi; Du, Yu-Cang

CORPORATE SOURCE: Shanghai Institute of Biochemistry, Chinese Academy of Sciences, Shanghai, 200031, Peop. Rep. China

SOURCE: Shengli Xuebao (1998), 50(2), 132-138

CODEN: SLHPAH; ISSN: 0371-0874

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The extent increase of Ca<sup>2+</sup>/CaM-dependent protein kinase II (CaMK II) autophosphorylation in various brain regions of rat reached a maximum value, one hour after s.c. administration of AVP(4-8). The increase in the cortex amounted to 192% of the control, while in the hippocampus only 40%. The autophosphorylation of CaMK II was dependent on both Ca<sup>2+</sup> and CaM. Western blotting with anti-CaMK II $\alpha$  monoclonal antibody showed that the content of CaMK II $\alpha$  in cortex did not show detectable change in 1 h as compared to the control group. ZDC(C)PR, an antagonist of AVP(4-8), markedly blocked the effect of AVP(4-8), suggesting that AVP(4-8) stimulated CaMK II autophosphorylation is mediated through its receptor.

IT 87558-80-3

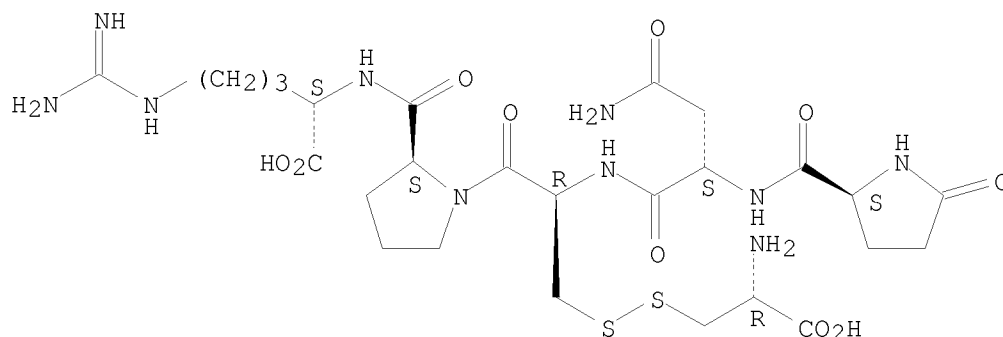
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(vasopressin fragment effect on calcium/calmodulin-dependent protein kinase II autophosphorylation in rat brain)

RN 87558-80-3 CAPLUS

CN L-Arginine, 5-oxo-L-prolyl-L-asparaginyl-L-cysteinyl-L-prolyl-, disulfide with L-cysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L27 ANSWER 45 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:434959 CAPLUS

DOCUMENT NUMBER: 129:127028

ORIGINAL REFERENCE NO.: 129:25914h, 25915a

TITLE: A stability study involving HPLC analysis of aqueous thiorphan solutions in the presence of human serum albumin

AUTHOR(S): Kuijpers, Eugenie A. P.; Den Hartigh, Jan; Vermeij, Pieter  
CORPORATE SOURCE: Department of Clinical Pharmacy and Toxicology, Leiden University Medical Center, Leiden, Neth.  
SOURCE: Pharmaceutical Development and Technology (1998), 3(2), 185-192  
CODEN: PDTEFS; ISSN: 1083-7450  
PUBLISHER: Marcel Dekker, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

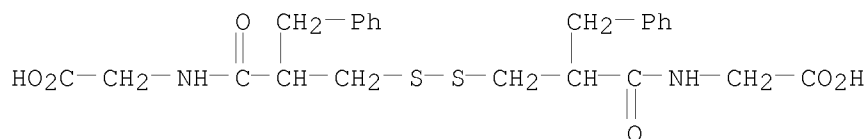
AB The stability of thiorphan (1.0 mg/mL) in normal saline containing 1% human serum albumin (HSA) was determined in order to find the most appropriate storage conditions. Direct HPLC of this solution was feasible through the use of a micellar chromatog. system and proved to be stability indicating. During 8 wk, the percentages of the initial thiorphan concentration remaining after storage at 4, 20, 30, and 50° were determined. An Arrhenius plot was composed using the rate consts. of thiorphan degradation at these temps. The thiorphan solution was stable for at least 2 mo if stored at -20°. Taking into account the oxidative degradation of about 7% after thawing, we determined that the solution can be kept in a refrigerator for 4 days.

Storage at room temperature should be limited to 1 day. By identification of the degradation products it could be concluded that thiorphan is degraded mainly via oxidation forming disulfides. Therefore, it is recommended that the solvent be purged with nitrogen before thiorphan is dissolved.

IT 123658-06-0  
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)  
(stability study of aqueous thiorphan solns. in human serum albumin presence by HPLC)

RN 123658-06-0 CAPLUS

CN Glycine, N,N'-[dithiobis[1-oxo-2-(phenylmethyl)-3,1-propanediyl]]bis-(9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 46 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:431176 CAPLUS

DOCUMENT NUMBER: 129:203230

ORIGINAL REFERENCE NO.: 129:41287a, 41290a

TITLE: Chemoenzymic Synthesis of N-Ras Lipopeptides

AUTHOR(S): Naegele, Edgar; Schelhaas, Michael; Kuder, Norman; Waldmann, Herbert

CORPORATE SOURCE: Department of Organic Chemistry, University of Karlsruhe, Karlsruhe, D-76128, Germany

SOURCE: Journal of the American Chemical Society (1998), 120(28), 6889-6902

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:203230

AB For the study of biol. phenomena influenced by the plasma-membrane-bound Ras proteins and other lipidated proteins, characteristic peptides which

embody the correct lipid modifications of their parent proteins (palmitoyl thioesters and farnesyl thioethers), as well as analogs thereof, may serve as suitable tools. For the construction of such acid- and base-labile peptide conjugates, the enzyme-labile p-acetoxybenzyloxycarbonyl (AcOZ) urethane blocking group was developed. The acetate moiety within the AcOZ group is easily saponified by treatment with acetyl esterase or lipase. After cleavage of the acetate group the resulting quinone methide spontaneously fragments, resulting in the liberation of the desired peptide or peptide conjugates. This enzymic protecting group technique formed the key step in the synthesis of the characteristic S-palmitoylated and S-farnesylated C-terminus of the human N-Ras protein. Deprotections are so mild that no undesired side reactions of the lipid conjugates are observed (i.e., no hydrolysis or  $\beta$ -elimination of the thioester and no acid-mediated attack on the double bonds of the farnesyl group). The combination of enzymic protecting group techniques with classical chemical methods allowed access to various fluorescent-labeled and differently lipid-modified Ras lipopeptides. Their application in biol. expts. enabled the study of the structural requirements for the acylation of Ras sequence motifs in vivo and gave insight into the subcellular site at which these modifications occur. The results indicate that the plasma membrane is a major site of cellular S-acylation. This supports a mechanism for the selective subcellular localization of lipidated proteins, including the Ras proteins themselves, by kinetic targeting to the plasma membrane.

IT 201407-28-5P 212119-85-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

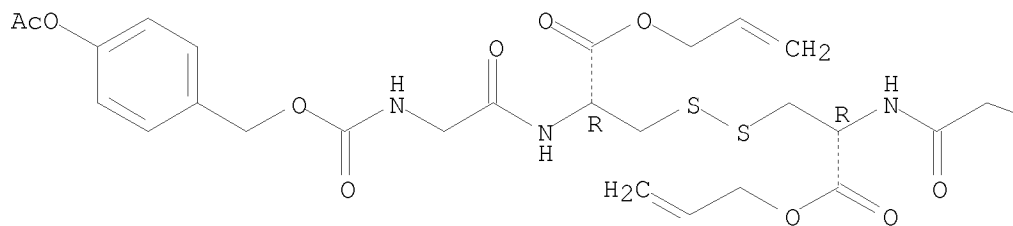
(chemoenzymic synthesis of N-ras lipopeptides using enzyme-labile (acetyloxy)benzyloxycarbonyl protective groups)

RN 201407-28-5 CAPLUS

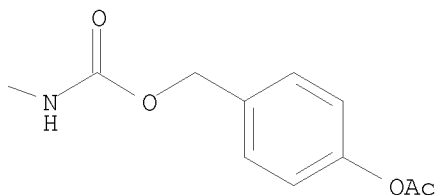
CN L-Cysteine, N-[[[4-(acetyloxy)phenyl]methoxy]carbonyl]glycyl-, 2-propenyl ester, bimol. (2 $\rightarrow$ 2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

PAGE 1-A



PAGE 1-B

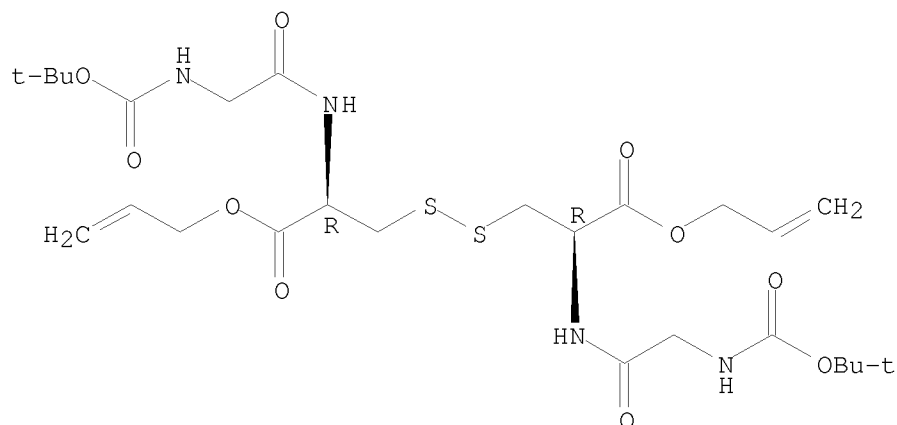


RN 212119-85-2 CAPLUS

CN L-Cysteine, N-[(1,1-dimethylethoxy)carbonyl]glycyl-, 2-propenyl ester, bimol. (2 $\rightarrow$ 2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



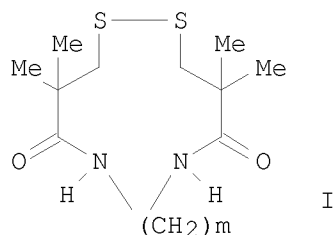


REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 47 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:389104 CAPLUS  
 DOCUMENT NUMBER: 129:113518  
 ORIGINAL REFERENCE NO.: 129:23203a,23206a  
 TITLE: 3,3'-Dithiobis(2,2-dimethylpropionamide) derivatives for remedy of gastrointestinal disorders caused by fluoropyrimidine-type antitumor agents  
 INVENTOR(S): Kurobe, Hiroshi; Fuzawa, Tetsuji; Sugawara, Tomokatsu; Kawai, Shinji; Kawabata, Hironori; Matsutani, Yoshihide; Takahashi, Jiro; Moriguchi, Koei; Endo, Takeshi  
 PATENT ASSIGNEE(S): Fuji Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10158163	A	19980616	JP 1996-332940	19961127
PRIORITY APPLN. INFO.:			JP 1996-332940	19961127
OTHER SOURCE(S):	MARPAT 129:113518			

GI



AB (R1R2NCOCMe2CH2S)2 [R1 = H, (un)substituted linear or branched alkyl; R2 = H, lower alkyl], their optical isomers, their cyclic analogs I (m = 0-6), or their their pharmacol. acceptable salts are useful for treatment of the title disorders. Oral administration of (HO2CCH2NHCOCMe2CH2S)2 at 1

mmol/kg for 3 days improved symptoms of gastrointestinal adverse effects of 5-FU in rats.

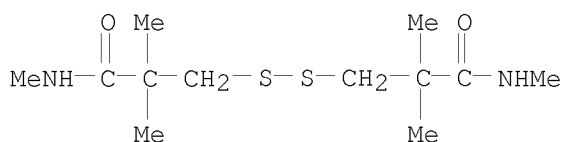
IT 97759-64-3 209456-18-8 209456-20-2  
209456-21-3 209456-22-4 209456-23-5  
209456-24-6 209456-25-7 209456-26-8  
209456-27-9 209456-28-0 209456-29-1  
209456-30-4 209456-31-5 209456-32-6  
209456-33-7 209456-34-8 209456-35-9  
209456-36-0 209456-39-3 209456-40-6  
209456-41-7

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(3,3'-dithiobis(2,2-dimethylpropionamide) derivs. for remedy of gastrointestinal disorders caused by fluoropyrimidine-type antitumor agents)

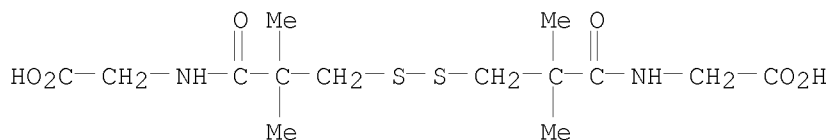
RN 97759-64-3 CAPLUS

CN Propanamide, 3,3'-dithiobis[N,2,2-trimethyl- (9CI) (CA INDEX NAME)



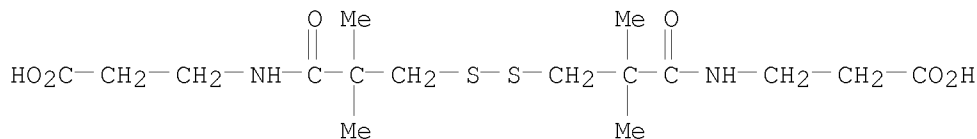
RN 209456-18-8 CAPLUS

CN Glycine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI)  
(CA INDEX NAME)



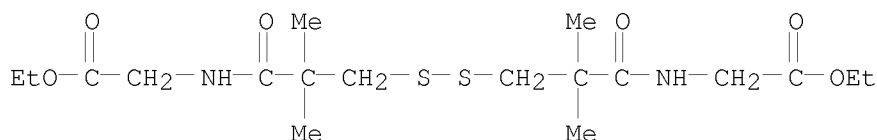
RN 209456-20-2 CAPLUS

CN  $\beta$ -Alanine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

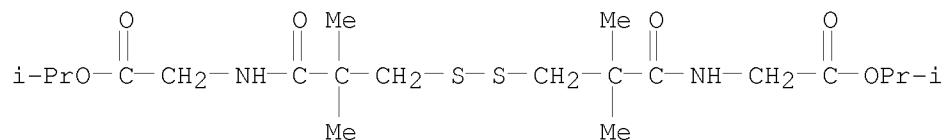


RN 209456-21-3 CAPLUS

CN 3-Oxa-10,11-dithia-6,15-diazaheptadecan-17-oic acid, 8,8,13,13-tetramethyl-4,7,14-trioxo-, ethyl ester (9CI) (CA INDEX NAME)

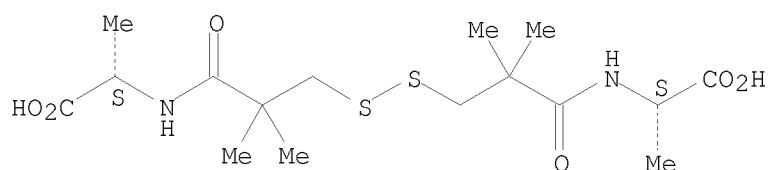


RN 209456-22-4 CAPLUS  
 CN 15-Oxa-7,8-dithia-3,12-diazaheptadecanoic acid, 5,5,10,10,16-pentamethyl-4,11,14-trioxo-, 1-methylethyl ester (CA INDEX NAME)



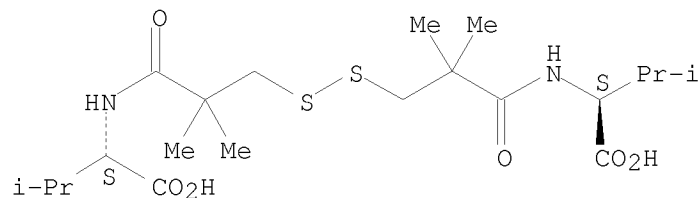
RN 209456-23-5 CAPLUS  
 CN L-Alanine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.



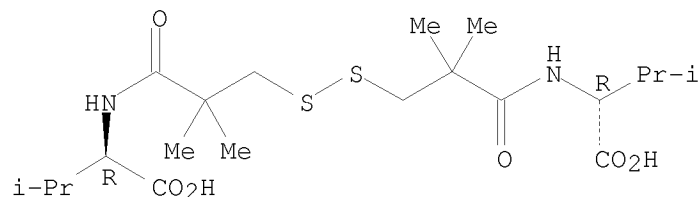
RN 209456-24-6 CAPLUS  
 CN L-Valine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.



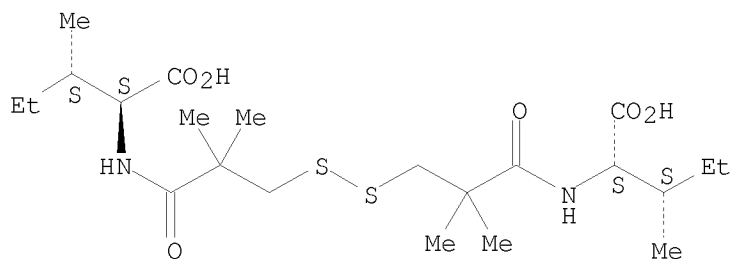
RN 209456-25-7 CAPLUS  
 CN D-Valine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.



RN 209456-26-8 CAPLUS  
 CN L-Isoleucine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

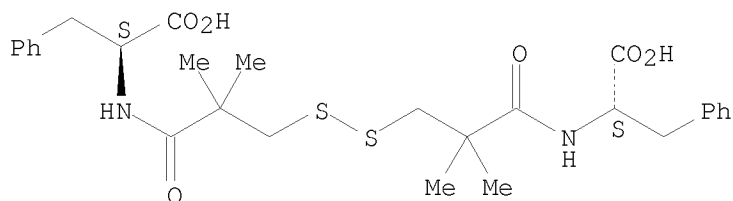
Absolute stereochemistry.



RN 209456-27-9 CAPLUS

CN L-Phenylalanine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

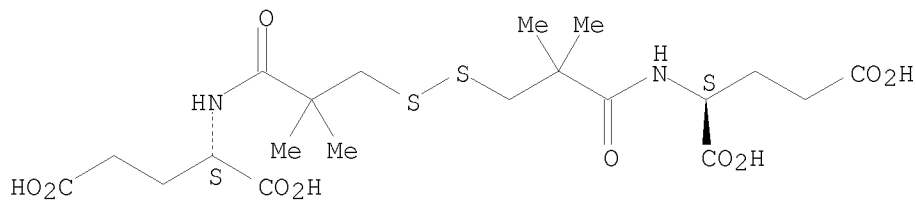
Absolute stereochemistry.



RN 209456-28-0 CAPLUS

CN L-Glutamic acid, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

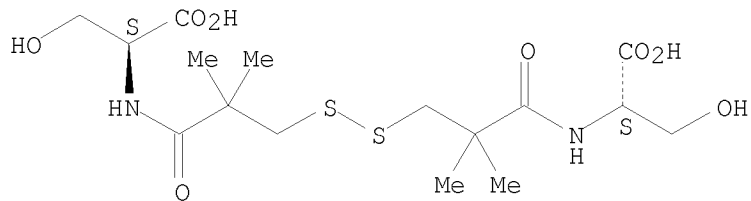
Absolute stereochemistry.



RN 209456-29-1 CAPLUS

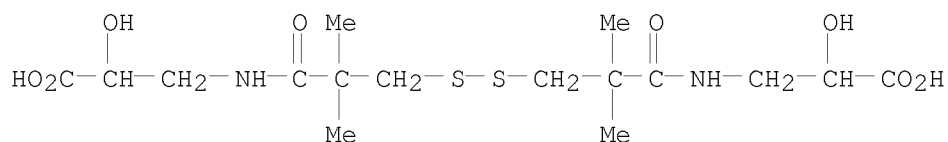
CN L-Serine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



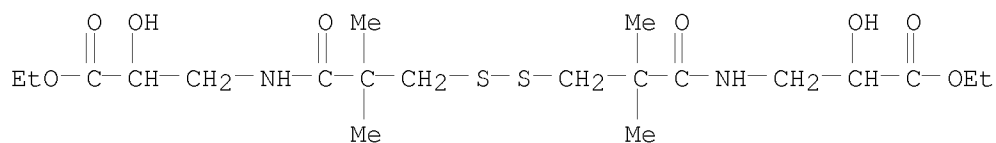
RN 209456-30-4 CAPLUS

CN Propanoic acid, 3,3'-[dithiobis[(2,2-dimethyl-1-oxo-3,1-propanediyl)imino]]bis[2-hydroxy- (9CI) (CA INDEX NAME)



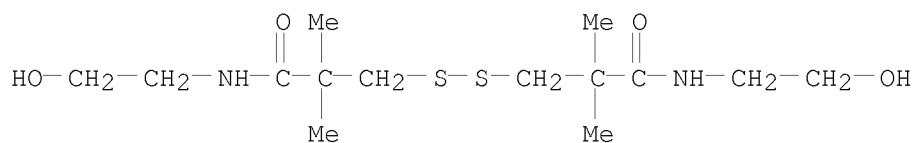
RN 209456-31-5 CAPLUS

CN 17-Oxa-8,9-dithia-4,13-diazanonadecanoic acid, 2,15-dihydroxy-6,6,11,11-tetramethyl-5,12,16-trioxo-, ethyl ester (CA INDEX NAME)



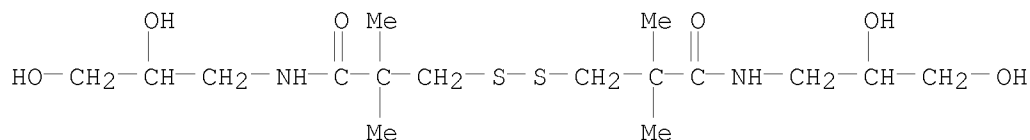
RN 209456-32-6 CAPLUS

CN Propanamide, 3,3'-dithiobis[N-(2-hydroxyethyl)-2,2-dimethyl- (9CI) (CA INDEX NAME)



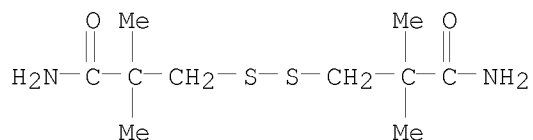
RN 209456-33-7 CAPLUS

CN Propanamide, 3,3'-dithiobis[N-(2,3-dihydroxypropyl)-2,2-dimethyl- (9CI) (CA INDEX NAME)



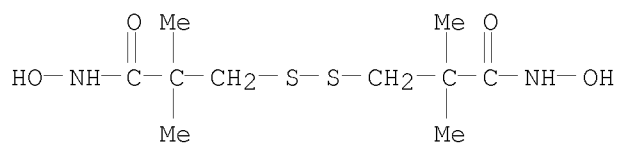
RN 209456-34-8 CAPLUS

CN Propanamide, 3,3'-dithiobis[2,2-dimethyl- (9CI) (CA INDEX NAME)

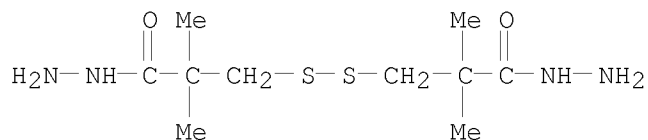


RN 209456-35-9 CAPLUS

CN Propanamide, 3,3'-dithiobis[N-hydroxy-2,2-dimethyl- (9CI) (CA INDEX NAME)

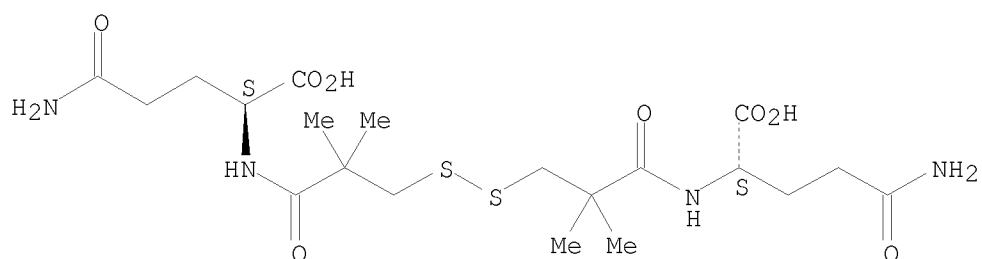


RN 209456-36-0 CAPLUS  
 CN Propanoic acid, 3,3'-dithiobis[2,2-dimethyl-, dihydrazide (9CI) (CA INDEX NAME)



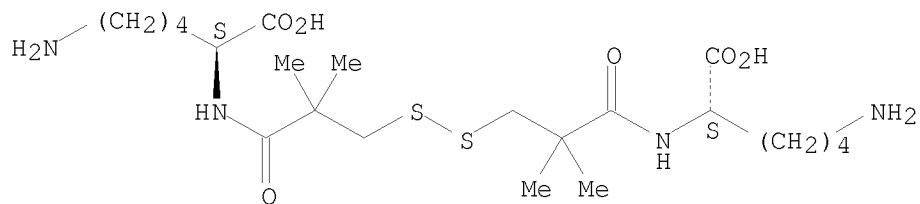
RN 209456-39-3 CAPLUS  
 CN L-Glutamine, N2,N2'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



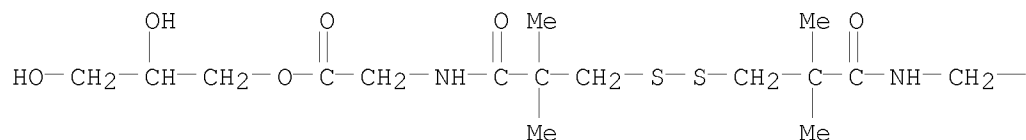
RN 209456-40-6 CAPLUS  
 CN L-Lysine, N2,N2'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

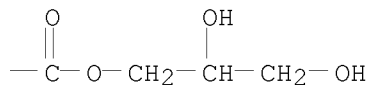
Absolute stereochemistry.



RN 209456-41-7 CAPLUS  
 CN 15-Oxa-7,8-dithia-3,12-diazaoctadecanoic acid, 17,18-dihydroxy-5,5,10,10-tetramethyl-4,11,14-trioxo-, 2,3-dihydroxypropyl ester (9CI) (CA INDEX NAME)

PAGE 1-A





L27 ANSWER 48 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:389100 CAPLUS

DOCUMENT NUMBER: 129:113517

ORIGINAL REFERENCE NO.: 129:23203a, 23206a

TITLE: Dithiobis(carboxylic acid) derivatives for remedy of gastrointestinal disorders caused by fluoropyrimidine-type antitumor agents

INVENTOR(S): Kurobe, Hiroshi; Fuzawa, Tetsuji; Sugawara, Tomokatsu; Kawai, Shinji; Kawabata, Hironori; Matsutani, Yoshihide; Takahashi, Jiro; Moriguchi, Koei; Endo, Takeshi

PATENT ASSIGNEE(S): Fuji Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

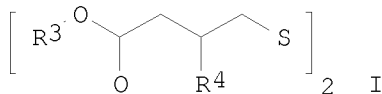
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10158159	A	19980616	JP 1996-332942	19961127
PRIORITY APPLN. INFO.:			JP 1996-332942	19961127
OTHER SOURCE(S):	MARPAT	129:113517		

GI



AB (R1O2CACR2MeCH2S)2 [A = bond, CHOH; R1 = H, alkyl (substituted with 1 or 2 OH), (CH2)mNH2; R2 = Me, alkoxy, OH; no definition given for m], their pharmacol. acceptable salts, or 4,4'-dithiobis-2-butenic acids I (R3 = H, C1-6 alkyl; R4 = H, Me) are useful for treatment of the title disorders. Oral administration of 3,3'-dithiobis(2,2-dimethylpropionic acid) at 1 mmol/kg for 3 days improved symptoms of gastrointestinal adverse effects of 5-FU in rats.

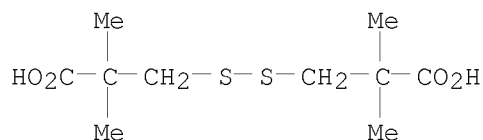
IT 63684-31-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

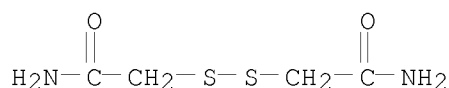
(dithiobis(carboxylic acid) derivs. for remedy of gastrointestinal disorders caused by fluoropyrimidine-type antitumor agents)

RN 63684-31-1 CAPLUS

CN Propanoic acid, 3,3'-dithiobis[2,2-dimethyl- (9CI) (CA INDEX NAME)



L27 ANSWER 49 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:368903 CAPLUS  
 DOCUMENT NUMBER: 129:92767  
 ORIGINAL REFERENCE NO.: 129:19051a,19054a  
 TITLE: Efficacies of zinc finger-active drugs against Giardia lamblia  
 AUTHOR(S): Nash, Theodore; Rice, William G.  
 CORPORATE SOURCE: Laboratory of Parasitic Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, 20892, USA  
 SOURCE: Antimicrobial Agents and Chemotherapy (1998), 42(6), 1488-1492  
 CODEN: AMACCQ; ISSN: 0066-4804  
 PUBLISHER: American Society for Microbiology  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Twenty-nine of 34 (85%) Zn finger-active compds. at 300  $\mu\text{M}$  or less inhibited the growth of Giardia lamblia. The most active compound, disulfiram (Antabuse), was cidal at  $1.23 \pm 0.32 \mu\text{M}$ . In the adult mouse model, significant in vivo activity was demonstrated by increased cure rates and decreased parasite burdens.  
 IT 64057-55-2, NSC 28727  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (efficacies of zinc finger-active drugs against Giardia lamblia)  
 RN 64057-55-2 CAPLUS  
 CN Acetamide, 2,2'-dithiobis- (7CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 50 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:361002 CAPLUS  
 DOCUMENT NUMBER: 129:76507  
 ORIGINAL REFERENCE NO.: 129:15661a,15664a  
 TITLE: Dithiobis(dimethylpropionamides) and pharmaceuticals for treatment of kidney or liver diseases  
 INVENTOR(S): Kurobe, Hiroshi; Nunosawa, Tetsuji; Sanada, Kunio; Kagawara, tomokatsu; Moriguchi, Yukishige; Endo, Takeshi  
 PATENT ASSIGNEE(S): Fuji Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10152468	A	19980609	JP 1996-327554	19961121
PRIORITY APPLN. INFO.:			JP 1996-327554	19961121
OTHER SOURCE(S):	MARPAT 129:76507			

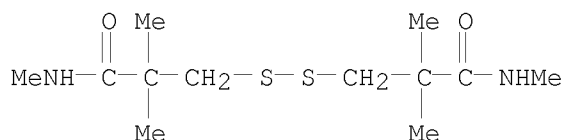
AB Title pharmaceuticals contain (R1R2NCOCMe2CH2S)2 [I; R1 = H, NH2, OH, (substituted) alkyl; R2 = H, lower alkyl], their isomers, I [R1R1 = (CH2)m; R2 = H; m = 0-6], or their salts as active ingredients. Glycine Et ester HCl salt was treated with (ClCOCMe2CH2S)2 and dimethylaminopyridine in dioxane at room temperature overnight and treated with NaOH in MeOH at room temperature for 4 h to give 81% I (R1 = CH2CO2H, R2 = H), which was i.v. administered to ethionine-treated rats at 2 mmol/5 mL/kg to show serum GOT 92.8 IU/L, GPT 49.4 IU/L, ALP 1113.2 IU/L, and BIL 0.04 mg/dL, vs. 211.0 IU/L, 104.2 IU/L, 1336.0 IU/L, and 0.11 mg/dL, resp., for control. Formulation examples were given.

IT 97759-64-3P 209456-18-8P 209456-20-2P  
 209456-21-3P 209456-22-4P 209456-23-5P  
 209456-24-6P 209456-25-7P 209456-26-8P  
 209456-27-9P 209456-28-0P 209456-29-1P  
 209456-30-4P 209456-31-5P 209456-32-6P  
 209456-33-7P 209456-34-8P 209456-35-9P  
 209456-36-0P 209456-39-3P 209456-40-6P  
 209456-41-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of dithiobis(dimethylpropionamides) as pharmaceuticals for treatment of kidney or liver diseases)

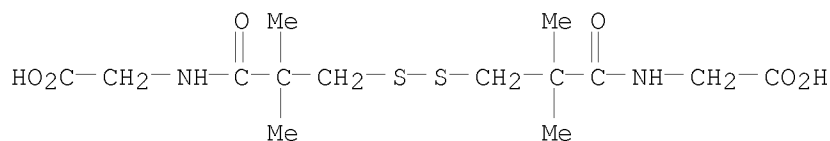
RN 97759-64-3 CAPLUS

CN Propanamide, 3,3'-dithiobis[N,2,2-trimethyl- (9CI) (CA INDEX NAME)



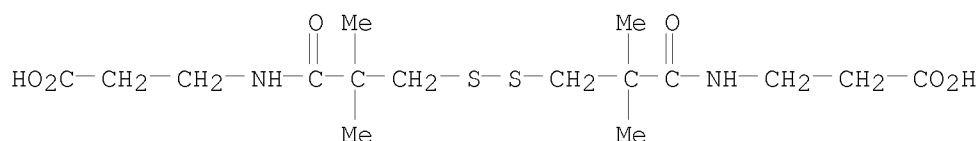
RN 209456-18-8 CAPLUS

CN Glycine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI)  
 (CA INDEX NAME)



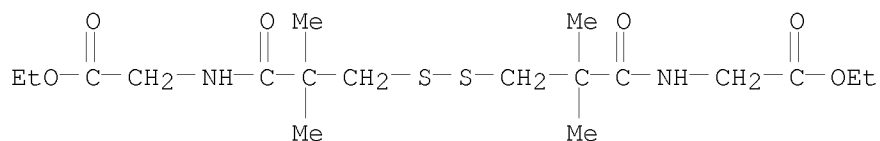
RN 209456-20-2 CAPLUS

CN β-Alanine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)



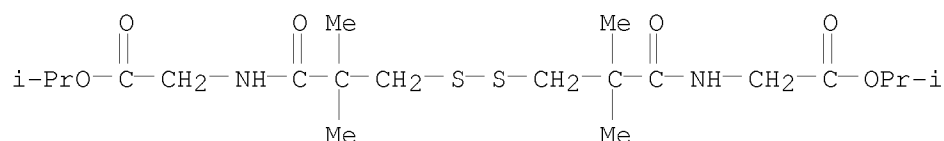
RN 209456-21-3 CAPLUS

CN 3-Oxa-10,11-dithia-6,15-diazaheptadecan-17-oic acid, 8,8,13,13-tetramethyl-4,7,14-trioxo-, ethyl ester (9CI) (CA INDEX NAME)



RN 209456-22-4 CAPLUS

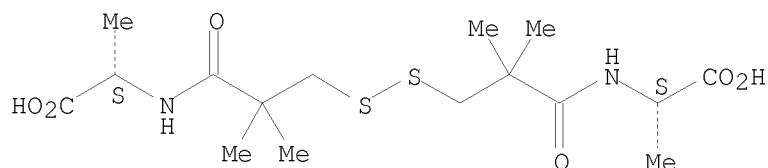
CN 15-Oxa-7,8-dithia-3,12-diazaheptadecanoic acid, 5,5,10,10,16-pentamethyl-4,11,14-trioxo-, 1-methylethyl ester (CA INDEX NAME)



RN 209456-23-5 CAPLUS

CN L-Alanine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

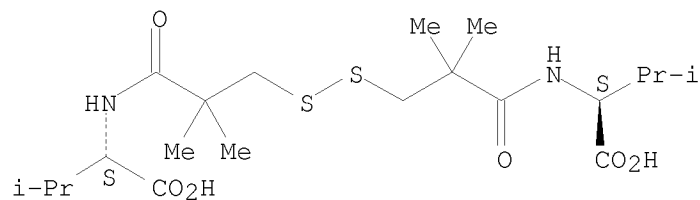
Absolute stereochemistry.



RN 209456-24-6 CAPLUS

CN L-Valine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

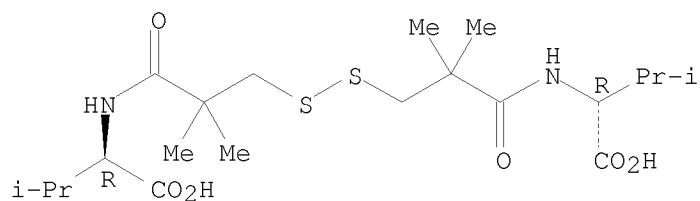
Absolute stereochemistry.



RN 209456-25-7 CAPLUS

CN D-Valine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

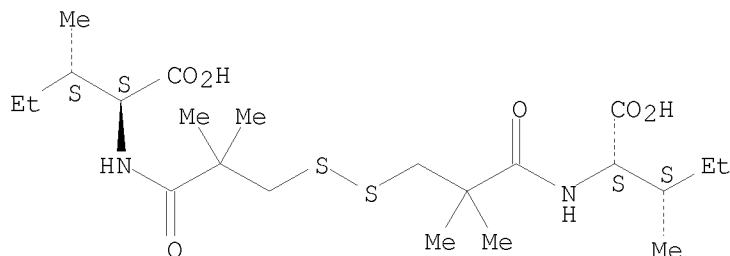
Absolute stereochemistry.



RN 209456-26-8 CAPLUS

CN L-Isoleucine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

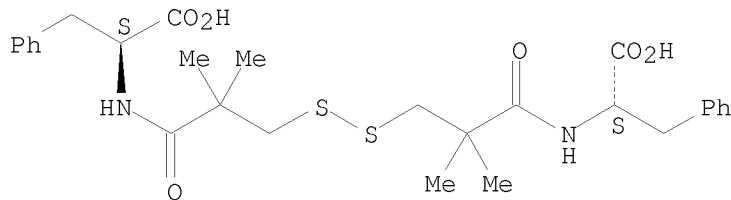
Absolute stereochemistry.



RN 209456-27-9 CAPLUS

CN L-Phenylalanine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

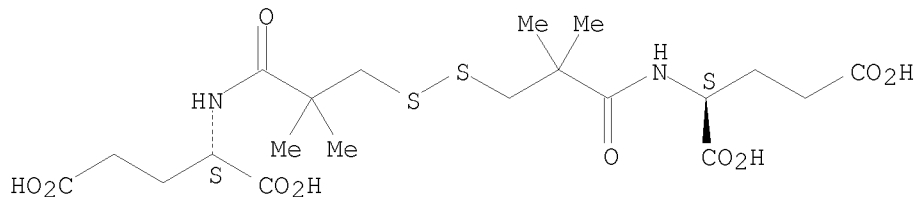
Absolute stereochemistry.



RN 209456-28-0 CAPLUS

CN L-Glutamic acid, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

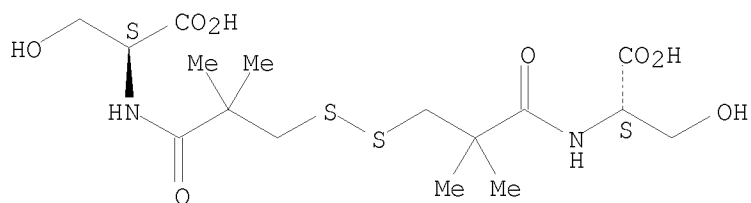
Absolute stereochemistry.



RN 209456-29-1 CAPLUS

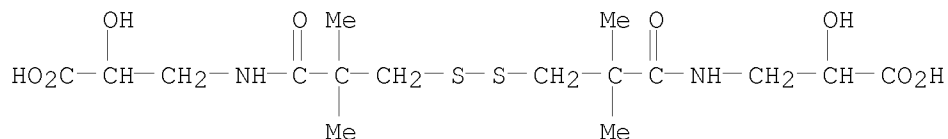
CN L-Serine, N,N'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



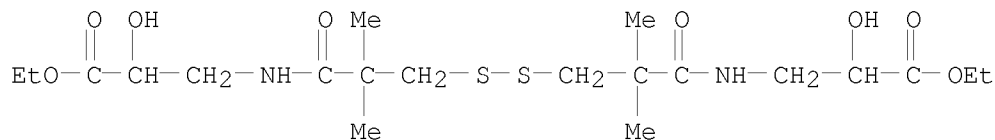
RN 209456-30-4 CAPLUS

CN Propanoic acid, 3,3'-[dithiobis[(2,2-dimethyl-1-oxo-3,1-propanediyl)imino]]bis[2-hydroxy- (9CI) (CA INDEX NAME)



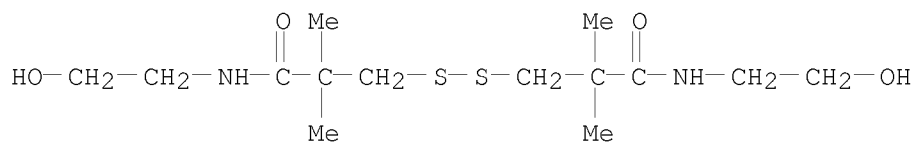
RN 209456-31-5 CAPLUS

CN 17-Oxa-8,9-dithia-4,13-diazanonadecanoic acid, 2,15-dihydroxy-6,6,11,11-tetramethyl-5,12,16-trioxo-, ethyl ester (CA INDEX NAME)



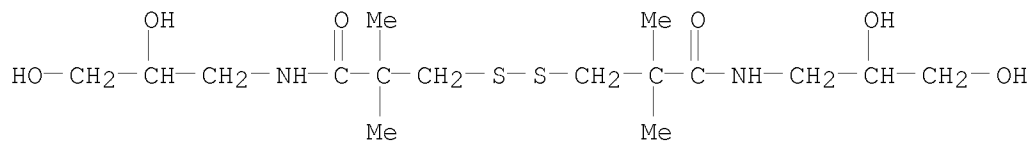
RN 209456-32-6 CAPLUS

CN Propanamide, 3,3'-dithiobis[N-(2-hydroxyethyl)-2,2-dimethyl- (9CI) (CA INDEX NAME)



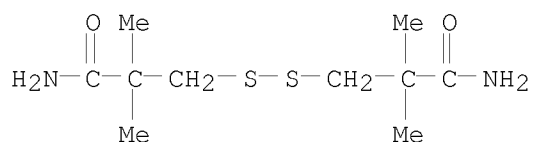
RN 209456-33-7 CAPLUS

CN Propanamide, 3,3'-dithiobis[N-(2,3-dihydroxypropyl)-2,2-dimethyl- (9CI) (CA INDEX NAME)



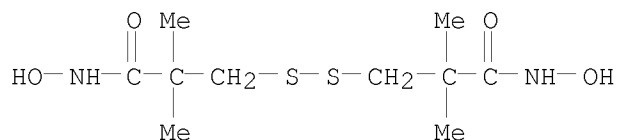
RN 209456-34-8 CAPLUS

CN Propanamide, 3,3'-dithiobis[2,2-dimethyl- (9CI) (CA INDEX NAME)



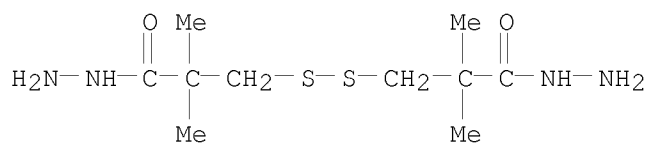
RN 209456-35-9 CAPLUS

CN Propanamide, 3,3'-dithiobis[N-hydroxy-2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 209456-36-0 CAPLUS

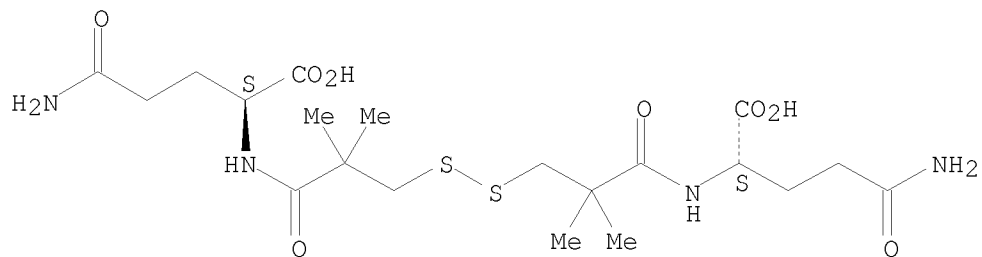
CN Propanoic acid, 3,3'-dithiobis[2,2-dimethyl-, dihydrazide (9CI) (CA INDEX NAME)



RN 209456-39-3 CAPLUS

CN L-Glutamine, N2,N2'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

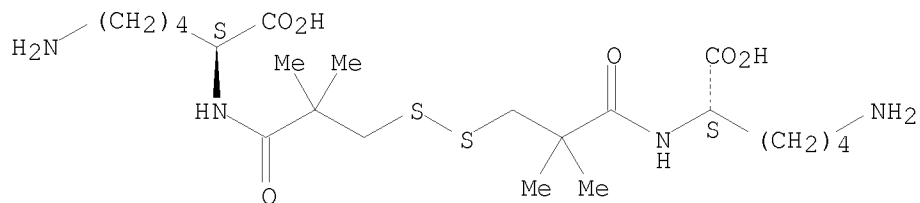
Absolute stereochemistry.



RN 209456-40-6 CAPLUS

CN L-Lysine, N2,N2'-[dithiobis(2,2-dimethyl-1-oxo-3,1-propanediyl)]bis- (9CI) (CA INDEX NAME)

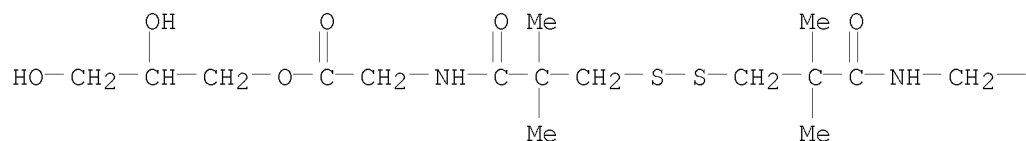
Absolute stereochemistry.



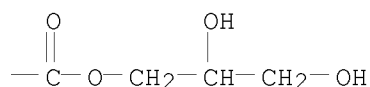
RN 209456-41-7 CAPLUS

CN 15-Oxa-7,8-dithia-3,12-diazaoctadecanoic acid, 17,18-dihydroxy-5,5,10,10-tetramethyl-4,11,14-trioxo-, 2,3-dihydroxypropyl ester (9CI) (CA INDEX NAME)

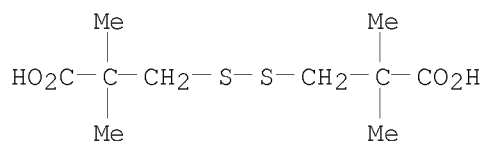
PAGE 1-A



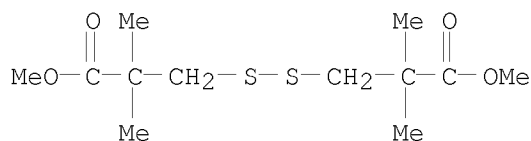
PAGE 1-B



IT 63684-31-1 209456-37-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of dithiobis(dimethylpropionamides) as pharmaceuticals for treatment of kidney or liver diseases)  
 RN 63684-31-1 CAPLUS  
 CN Propanoic acid, 3,3'-dithiobis[2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 209456-37-1 CAPLUS  
 CN Propanoic acid, 3,3'-dithiobis[2,2-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



=> d 127 ibib abs hitstr 51-100

L27 ANSWER 51 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:360991 CAPLUS  
 DOCUMENT NUMBER: 129:76506  
 ORIGINAL REFERENCE NO.: 129:15661a,15664a  
 TITLE: Dithiobis(carboxylic acid) derivatives and drugs containing them for kidney and liver diseases  
 INVENTOR(S): Kurobe, Hiroshi; Fuzawa, Tetsuji; Sugawara, Tomotada; Moriguchi, Yukihide; Endo, Takeshi  
 PATENT ASSIGNEE(S): Fuji Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10152435	A	19980609	JP 1996-327870	19961121
PRIORITY APPLN. INFO.:			JP 1996-327870	19961121

OTHER SOURCE(S): MARPAT 129:76506

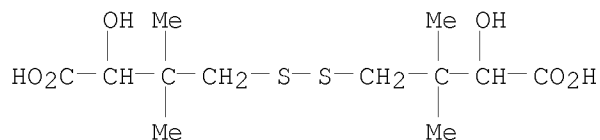
AB The drugs contain (R1OCOACMeR2CH2S)2 [A = direct bond, CH(OH); R1 = H, alkyl which may be substituted with 1-2 OH or NH2; R2 = Me, alkoxy, OH] and their pharmacol. acceptable salts as active ingredients. Also claimed are the drugs containing (R1OCOCH:CR2CH2S)2 (R1 = H, C1-6 alkyl; R2 = H, Me) as active ingredients. 3,3'-Dithiobis(2,2-dimethylpropionic acid) (I) was orally administered to streptozotocin-induced diabetic rats to lower plasma glucose, urea-N, cholesterol, triglycerides, etc., thus diminishing renal failure. I was also effective against ethionine-induced liver dysfunction. Oral preps. of 3,3'-dithiobis(2,2-dimethylpropionic acid) di(3-aminopropyl) ester were also formulated.

IT 92038-94-3P 209413-08-1P 209413-10-5P  
 209413-13-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of dithiobis(carboxylic acid) derivs. as therapeutics for liver and kidney dysfunctions)

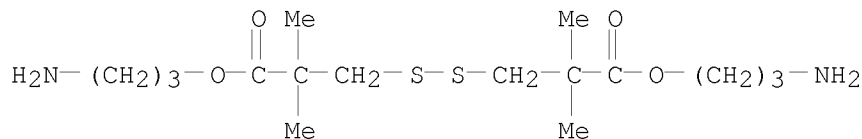
RN 92038-94-3 CAPLUS

CN Butanoic acid, 4,4'-dithiobis[2-hydroxy-3,3-dimethyl- (9CI) (CA INDEX NAME)



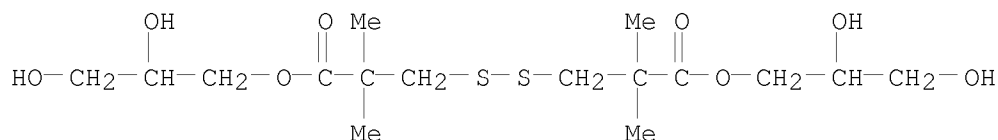
RN 209413-08-1 CAPLUS

CN Propanoic acid, 3,3'-dithiobis[2,2-dimethyl-, bis(3-aminopropyl) ester (9CI) (CA INDEX NAME)

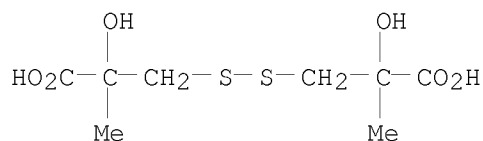


RN 209413-10-5 CAPLUS

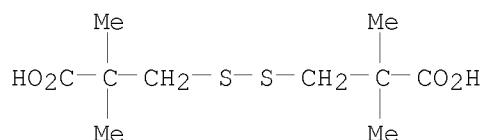
CN Propanoic acid, 3,3'-dithiobis[2,2-dimethyl-, bis(2,3-dihydroxypropyl) ester (9CI) (CA INDEX NAME)



RN 209413-13-8 CAPLUS  
 CN Propanoic acid, 3,3'-dithiobis[2-hydroxy-2-methyl- (9CI) (CA INDEX NAME)

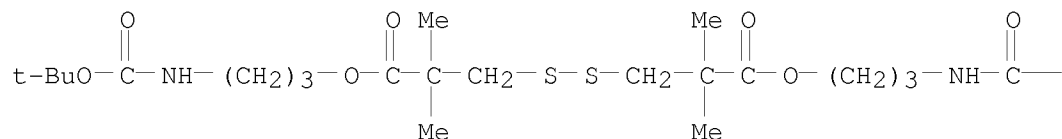


IT 63684-31-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of dithiobis(carboxylic acid) derivs. as therapeutics for liver and kidney dysfunctions)  
 RN 63684-31-1 CAPLUS  
 CN Propanoic acid, 3,3'-dithiobis[2,2-dimethyl- (9CI) (CA INDEX NAME)



IT 209413-09-2P 209413-11-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of dithiobis(carboxylic acid) derivs. as therapeutics for liver and kidney dysfunctions)  
 RN 209413-09-2 CAPLUS  
 CN 6,15-Dioxo-10,11-dithia-2,19-diazaeicosanedioic acid, 8,8,13,13-tetramethyl-7,14-dioxo-, 1,20-bis(1,1-dimethylethyl) ester (CA INDEX NAME)

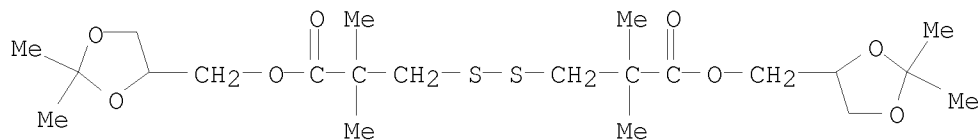
PAGE 1-A



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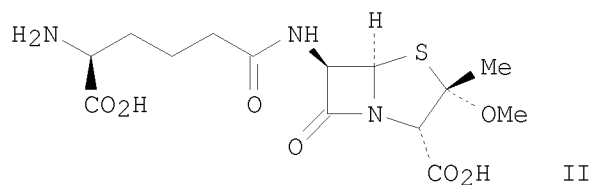
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RN 209413-11-6 CAPLUS  
 CN Propanoic acid, 3-[[3-[(2,2-dimethyl-1,3-dioxolan-4-yl)methoxy]-2,2-dimethyl-3-oxopropyl]dithio]-2,2-dimethyl-, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl ester (CA INDEX NAME)





ACCESSION NUMBER: 1998:349998 CAPLUS  
 DOCUMENT NUMBER: 129:68026  
 ORIGINAL REFERENCE NO.: 129:14127a,14130a  
 TITLE: Synthesis of  $\delta$ -(L- $\alpha$ -aminoadipoyl)-L-cysteinyl-D-(O-methyl)-D-allothreonine a substrate for isopenicillin-N synthase and its O-methyl-D-threonine epimer  
 AUTHOR(S): Petursson, Sigthor; Baldwin, Jack E.  
 CORPORATE SOURCE: University of Akureyri, Akureyri, 600, Iceland  
 SOURCE: Tetrahedron (1998), 54(22), 6001-6010  
 CODEN: TETRAB; ISSN: 0040-4020  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 129:68026  
 GI



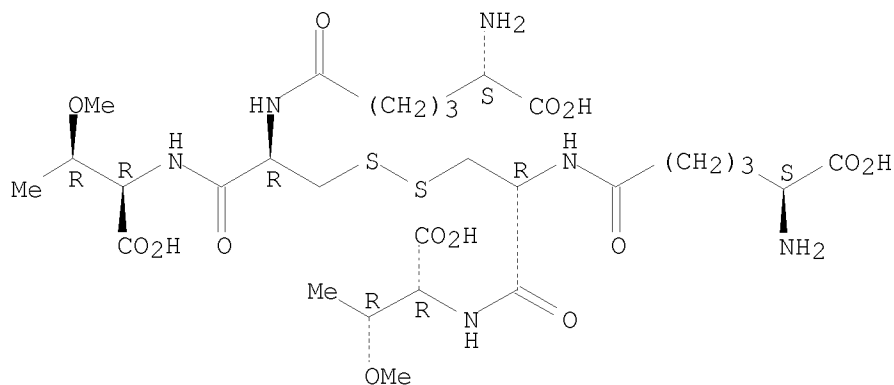
AB The paper describes the synthesis of the title epimeric tripeptides as modified substrates for the enzyme isopenicillin N synthase. The D-allothreonine tripeptide (I) is an excellent substrate for the enzyme whereas the D-threonine epimer did not react at all. The compound formed by the enzyme with tripeptide I is new 2- $\alpha$ -methoxypenicillin II.

IT 209050-99-7P 910034-85-4P  
 RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
 (preparation of allothreonine and threonine tripeptides as substrate for isopenicillin N synthase)

RN 209050-99-7 CAPLUS

CN D-Allothreonine, N-[(5S)-5-amino-5-carboxy-1-oxopentyl]-L-cysteinyl-O-methyl-, bimol. (1 $\rightarrow$ 1')-disulfide (9CI) (CA INDEX NAME)

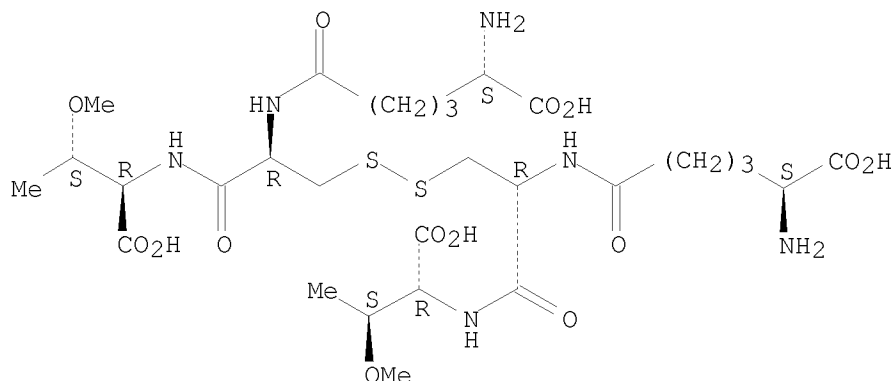
Absolute stereochemistry.



RN 910034-85-4 CAPLUS

CN D-Threonine, N-[(5S)-5-amino-5-carboxy-1-oxopentyl]-L-cysteinyl-O-methyl-,  
bimol. (1→1')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 53 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:343261 CAPLUS

DOCUMENT NUMBER: 129:90354

ORIGINAL REFERENCE NO.: 129:18467a,18470a

TITLE: GR231118 (1229U91) and other analogs of the C-terminus  
of neuropeptide Y are potent neuropeptide Y Y1  
receptor antagonists and neuropeptide Y Y4 receptor  
agonists

AUTHOR(S): Parker, Eric M.; Babijs, Carol K.; Balasubramaniam,  
Ambikaipakan; Burrier, Robert E.; Guzzi, Mario; Hamud,  
Fozia; Mukhopadhyay, G.; Rudinski, Mark S.; Tao, Z.;  
Tice, Melissa; Xia, Ling; Mullins, Deborra E.;  
Salisbury, Brian G.

CORPORATE SOURCE: Department of Central Nervous System and  
Cardiovascular Research, Schering-Plough Research  
Institute, Kenilworth, NJ, 07033-0539, USA

SOURCE: European Journal of Pharmacology (1998), 349(1),  
97-105

CODEN: EJPHAZ; ISSN: 0014-2999

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB GR231118, BW1911U90, Bis(31/31') {[Cys31, Trp32, Nva34] neuropeptide  
Y(31-36)} (T-190) and [Trp-Arg-Nva-Arg-Tyr]2-NH2 (T-241) are peptide  
analogs of the C-terminus of neuropeptide Y that have recently been shown  
to be antagonists of the neuropeptide Y Y1 receptor. In this study, the  
activity of these peptides at each of the cloned neuropeptide Y receptor  
subtypes is determined in radioligand binding assays and in functional assays  
(inhibition of forskolin-stimulated cAMP formation). GR231118 is a potent  
antagonist at the human and rat neuropeptide Y Y1 receptors (pA2=10.5 and  
10.0, resp.; pKi=10.2 and 10.4, resp.), a potent agonist at the human  
neuropeptide Y Y4 receptor (pEC50=8.6; pKi=9.6) and a weak agonist at the  
human and rat neuropeptide Y Y2 and Y5 receptors. GR231118 also has high  
affinity for the mouse neuropeptide Y Y6 receptor (pKi=8.8). Therefore,  
GR231118 is a relatively selective neuropeptide Y Y1 receptor antagonist,  
but has appreciable activity at the neuropeptide Y Y4 and Y6 receptors as  
well. BW1911U90, T-190 and T-241 are moderately potent neuropeptide Y Y1  
receptor antagonists (pA2=7.1, 5.8 and 6.5, resp.; pKi=8.3, 6.5 and 6.8,  
resp.) and neuropeptide Y Y4 receptor agonists (pEC50=6.8, 6.3 and 6.6,  
resp.; pKi=8.3, 7.7 and 8.3, resp.). These data suggest that the

C-terminus of neuropeptide Y and related peptides is sufficient for activation of the neuropeptide Y Y4 receptor, but is not sufficient for activation of the neuropeptide Y Y1 receptor. Because BW1911U90, T-190 and T-241 are significantly less potent at the cloned human neuropeptide Y Y1 receptor than at the neuropeptide Y receptor in human erythroleukemia cells, these cells may express a novel neuropeptide Y receptor with high affinity for these peptides.

IT 172997-97-6

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

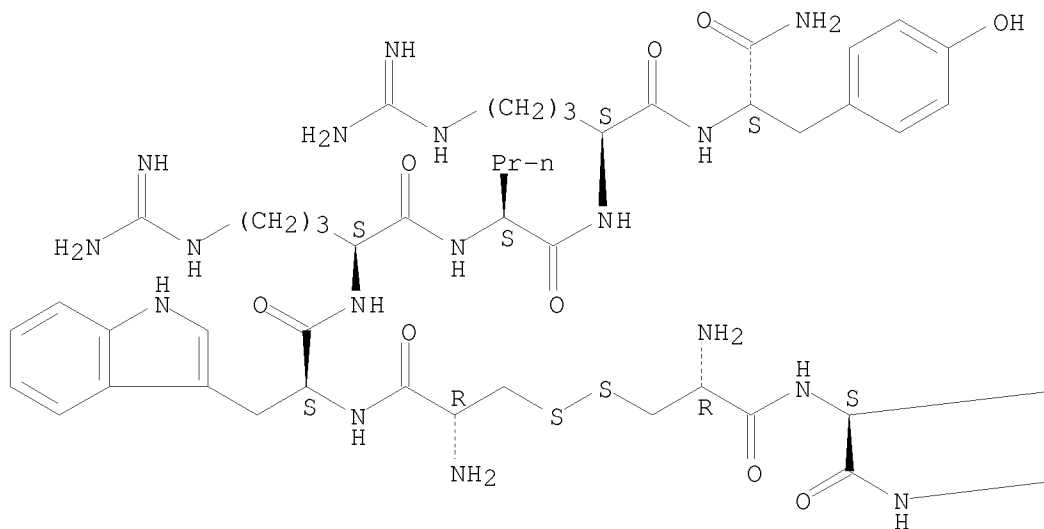
(analog of the C-terminus of neuropeptide Y are potent neuropeptide Y Y1 receptor antagonists and neuropeptide Y Y4 receptor agonists)

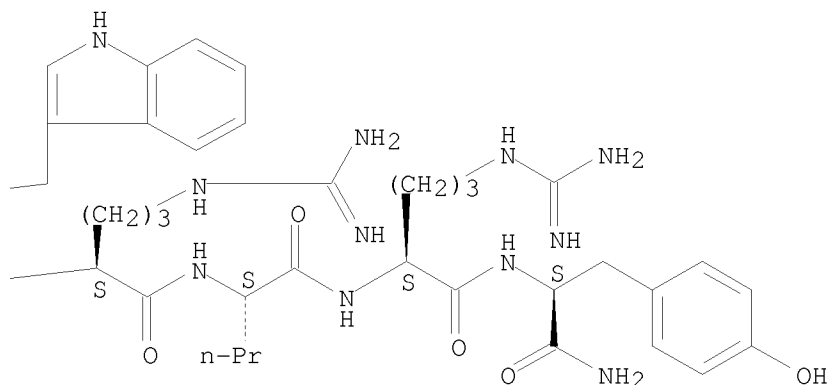
RN 172997-97-6 CAPLUS

CN L-Tyrosinamide, L-cysteinyl-L-tryptophyl-L-arginyl-L-norvalyl-L-arginyl-, bimol. (1→1')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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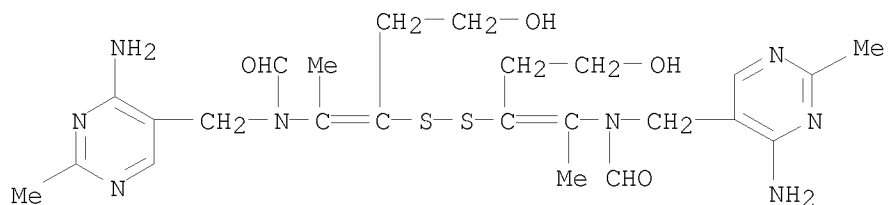
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 54 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:338126 CAPLUS  
 DOCUMENT NUMBER: 129:23424  
 ORIGINAL REFERENCE NO.: 129:4867a, 4870a  
 TITLE: Thiamine disulfides and medicines containing the same as the active ingredient  
 INVENTOR(S): Shoji, Shozo; Tachibana, Kuniomi  
 PATENT ASSIGNEE(S): Nissui Pharmaceutical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 13 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

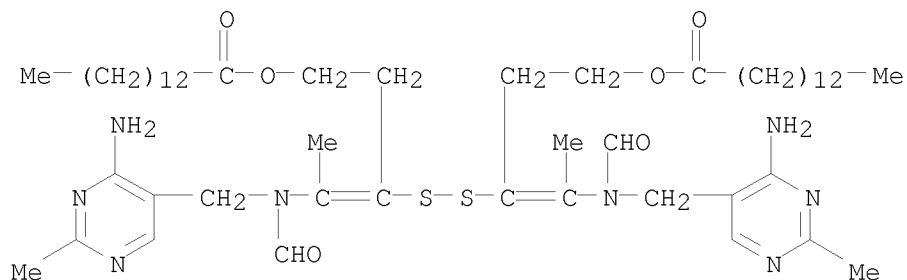
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9820877	A1	19980522	WO 1996-JP3341	19961114
W: CA, KR, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2240173	A1	19980522	CA 1996-2240173	19961114
EP 880966	A1	19981202	EP 1996-938466	19961114
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: WO 1996-JP3341 W 19961114  
 AB An anti-HIV drug and a preventive and therapeutic agent for AIDS containing thiamin disulfide dimyristate or a salt thereof as the active ingredient. These compds. exhibit an excellent anti-HIV activity and therefore are useful as a preventive or therapeutic agent for AIDS.  
 IT 67-16-3, Thiamine disulfide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (thiamine disulfides and medicines containing the same as the active ingredient for treatment of AIDS from HIV1)  
 RN 67-16-3 CAPLUS  
 CN Formamide, N,N'-[dithiobis[2-(2-hydroxyethyl)-1-methyl-2,1-ethenediyl]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]- (CA INDEX

NAME)

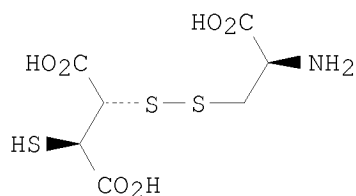


IT 188025-51-6P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(thiamine disulfides and medicines containing the same as the active ingredient for treatment of AIDS from HIV1)  
RN 188025-51-6 CAPLUS  
CN Tetradecanoic acid, dithiobis[3-[1-[[[4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]ethylidene]-3,1-propanediyl] ester (9CI)  
(CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 55 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:332427 CAPLUS  
DOCUMENT NUMBER: 129:95694  
ORIGINAL REFERENCE NO.: 129:19743a,19746a  
TITLE: Synthesis of the mono-cysteine disulfide of meso-2,3-dimercaptosuccinic acid  
AUTHOR(S): Li, Yushun; Carter, Dean E.; Mash, Eugene A.  
CORPORATE SOURCE: Synthetic Core Laboratory, Southwest Environmental Health Sciences Center, Department of Chemistry, The University of Arizona, Tucson, AZ, 85721, USA  
SOURCE: Synthetic Communications (1998), 28(11), 2057-2062  
CODEN: SYNCAV; ISSN: 0039-7911  
PUBLISHER: Marcel Dekker, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI



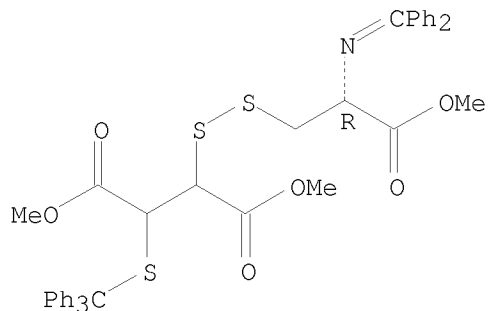
AB A synthesis of title compound I from di-Me meso-2,3-dimercaptosuccinate and a protected, activated cysteine derivative is described.

IT 209677-57-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of dimercaptosuccinic acid monocysteine disulfide)

RN 209677-57-6 CAPLUS

CN Butanedioic acid, 2-[[[(2R)-2-[(diphenylmethylene)amino]-3-methoxy-3-oxopropyl]dithio]-3-[(triphenylmethyl)thio]-, 1,4-dimethyl ester (CA INDEX NAME)

Absolute stereochemistry.

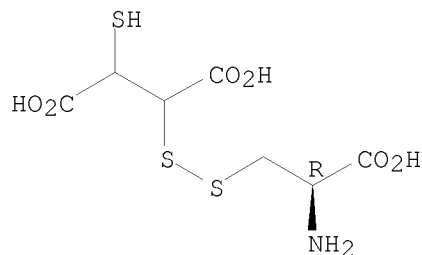


IT 209677-56-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of dimercaptosuccinic acid monocysteine disulfide)

RN 209677-56-5 CAPLUS

CN Butanedioic acid, 2-[[[(2R)-2-amino-2-carboxyethyl]dithio]-3-mercapto- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 56 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:269469 CAPLUS

DOCUMENT NUMBER: 128:313372

ORIGINAL REFERENCE NO.: 128:62005a,62008a

TITLE: Self-Assembled Monolayers of Branched Thiols and Disulfides on Gold: Surface Coverage, Order and Chain Orientation

AUTHOR(S): Chechik, Victor; Schoenherr, Holger; Vancso, G. Julius; Stirling, Charles J. M.

CORPORATE SOURCE: Centre for Molecular Materials and Department of Chemistry, University of Sheffield, Sheffield, S3 7HF, UK

SOURCE: Langmuir (1998), 14(11), 3003-3010

PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Self-assembly of several branched thiols possessing two long alkane chains and corresponding disulfides on the gold surface are described. The self-assembled monolayers (SAMs) obtained were investigated by contact angle measurements, Fourier transform IR spectroscopy (FT-IR), surface plasmon resonance (SPR), and atomic force microscopy (AFM). Monolayers formed by the disulfides were shown to be significantly thinner (SPR) and much more disordered (FT-IR, contact angles) than SAMs of the thiol counterparts. The presence of polar functional groups and complementary H-bond donors/acceptors in the alkane chains of branched disulfides was shown to assist the formation of better packed monolayers. Compared to SAMs of octadecanethiol, the branched thiols investigated in this study gave SAMs with a significantly reduced tilt angle, as seen in the FT-IR spectra. AFM revealed the lattice of one of the thiols on Au(111) with mol. (lattice) resolution showing a reduced area per mol. (as compared to octadecanethiol) which is consistent with a reduced tilt angle.

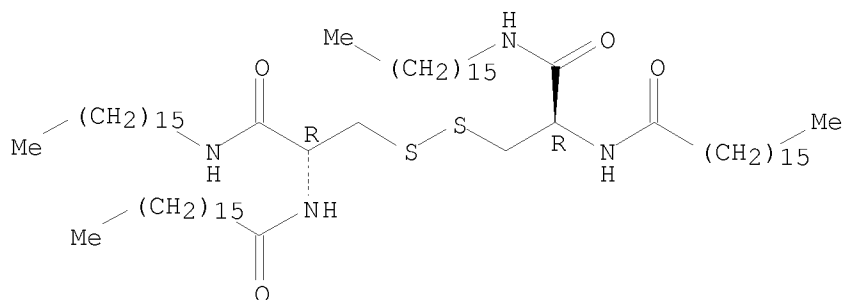
IT 206365-41-5P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
 (self-assembled monolayers of branched thiols and disulfides on gold)

RN 206365-41-5 CAPLUS

CN Heptadecanamide, N,N'-[dithiobis[(1R)-1-[(hexadecylamino)carbonyl]-2,1-ethanediyl]]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



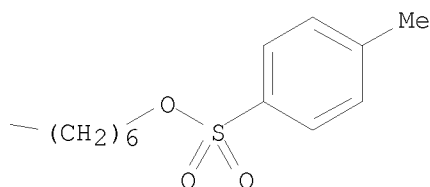
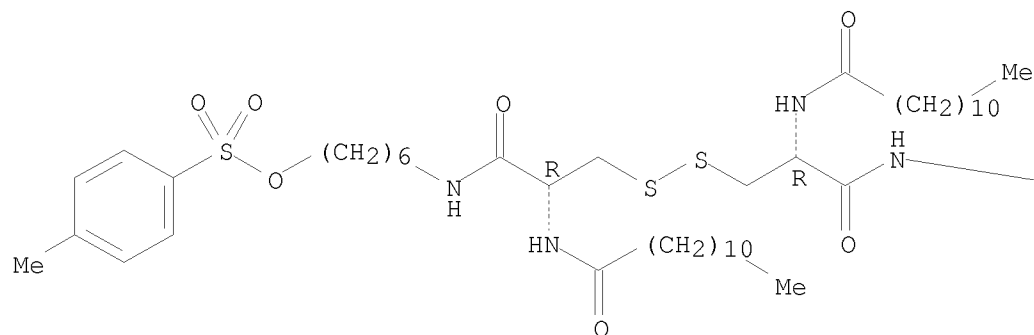
IT 206365-43-7P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
 (self-assembled monolayers of branched thiols and disulfides)

RN 206365-43-7 CAPLUS

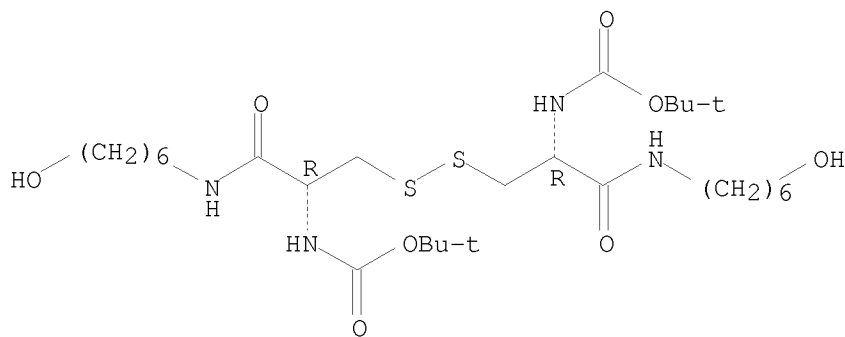
CN Dodecanamide, N,N'-[dithiobis[(1R)-1-[[[6-[[[4-methylphenyl)sulfonyl]oxy]hexyl]amino]carbonyl]-2,1-ethanediyl]]bis- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.



IT 206365-47-1P 206365-48-2P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (self-assembled monolayers of branched thiols and disulfides on gold)  
 RN 206365-47-1 CAPLUS  
 CN 11-Oxa-5,6-dithia-2,9-diazatridecanoic acid, 3,8-bis[[[6-  
 hydroxyhexyl)amino]carbonyl]-12,12-dimethyl-10-oxo-, 1,1-dimethylethyl  
 ester, (3R,8R)- (CA INDEX NAME)

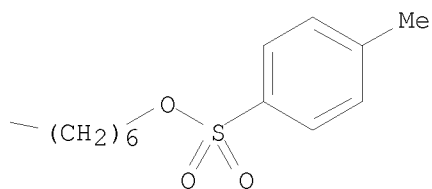
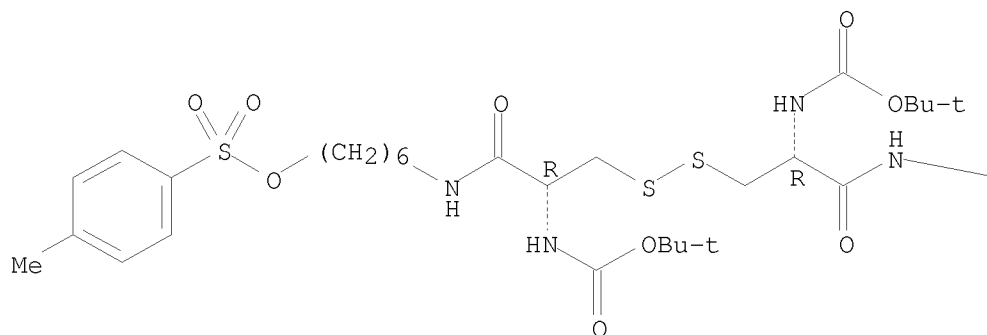
Absolute stereochemistry.



RN 206365-48-2 CAPLUS  
 CN 11-Oxa-5,6-dithia-2,9-diazatridecanoic acid, 12,12-dimethyl-3,8-bis[[[6-  
 [[(4-methylphenyl)sulfonyl]oxy]hexyl]amino]carbonyl]-10-oxo-,  
 1,1-dimethylethyl ester, (3R,8R)- (CA INDEX NAME)

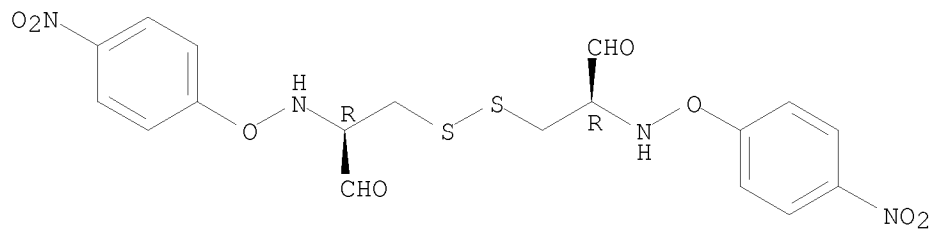
Absolute stereochemistry.



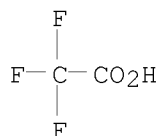


IT 206365-46-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (self-assembled monolayers of branched thiols and disulfides on gold)  
 RN 206365-46-0 CAPLUS  
 CN Propanal, 3,3'-dithiobis[2-[(4-nitrophenoxy)amino]-, (2R,2'R)-,  
 mono(trifluoroacetate) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 206365-45-9  
 CMF C18 H18 N4 O8 S2

Absolute stereochemistry.



CM 2  
 CRN 76-05-1  
 CMF C2 H F3 O2



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

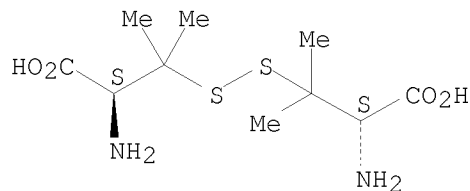
L27 ANSWER 57 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:262941 CAPLUS  
 DOCUMENT NUMBER: 128:305748  
 ORIGINAL REFERENCE NO.: 128:60533a,60536a  
 TITLE: Labeling of penicillamine disulfide with technetium-99m  
 AUTHOR(S): Unak, Perihan; Tunc, Mehtap; Duman, Yusuf  
 CORPORATE SOURCE: Institute of Nuclear Sciences, Ege University, Izmir, 35100, Turk.  
 SOURCE: Applied Radiation and Isotopes (1998), 49(7), 805-809  
 CODEN: ARISEF; ISSN: 0969-8043  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Complex forming conditions of Penicillamine di sulfide with 99mTc have been specified. Labeling of penicillamine di sulfide with 99mTc by direct reduction with SnCl2 did not give favorable good results while the 99mTc complex of penicillamine can be easily obtained. Ligand exchange reaction with 99mTc-gluconate was attempted and a 95% labeling efficiency was obtained. Radiopharmaceutical potential of 99mTc-PADS (99mTc-Penicillamine di sulfide) has been investigated with a gamma camera in rabbits and the complex was found to be taken up mostly by the liver and kidneys.

IT 20902-45-8DP, Penicillamine disulfide, technetium-99 complex  
 RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)  
 (labeling of penicillamine disulfide with technetium-99m and biodistribution)

RN 20902-45-8 CAPLUS  
 CN D-Valine, 3,3'-dithiobis- (CA INDEX NAME)

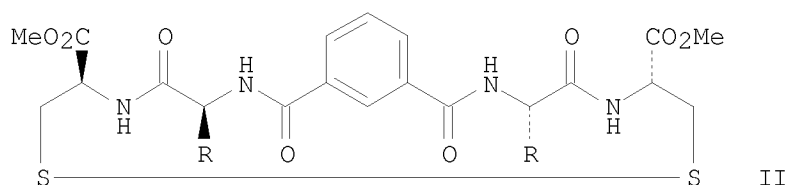
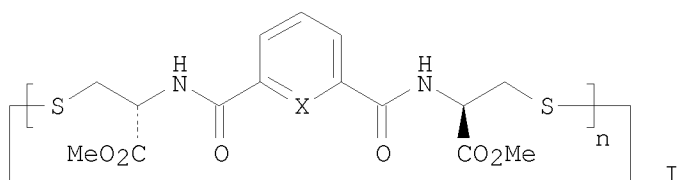
Absolute stereochemistry.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

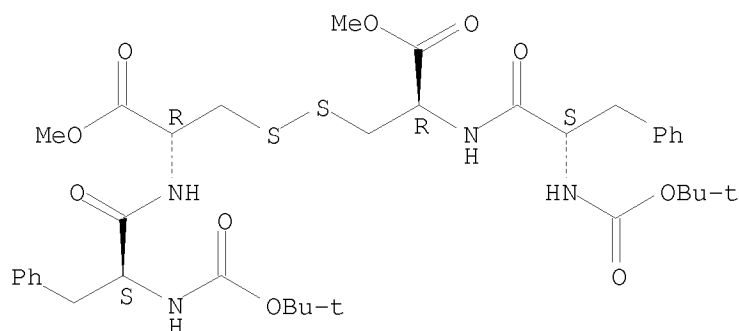
L27 ANSWER 58 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:253171 CAPLUS  
 DOCUMENT NUMBER: 128:230657  
 ORIGINAL REFERENCE NO.: 128:45691a,45694a  
 TITLE: Cystinophanes, a Novel Family of Aromatic-Bridged Cystine Cyclic Peptides: Synthesis, Crystal Structure, Molecular Recognition, and Conformational Studies

AUTHOR(S): Ranganathan, Darshan; Haridas, V.; Karle, Isabella L.  
 CORPORATE SOURCE: Biomolecular Research Unit, Regional Research  
 Laboratory (CSIR), Trivandrum, 695019, India  
 SOURCE: Journal of the American Chemical Society (1998),  
 120(12), 2695-2702  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



- AB A novel family of aromatic-bridged cystine cyclic peptides (cystinophanes) I (X = CH, N; n = 2-4) and II (R = CH<sub>2</sub>CHMe<sub>2</sub>, CH<sub>2</sub>Ph) has been synthesized by a single-step procedure involving condensation of 1,3 aromatic dicarbonyl dichlorides with either the simple L-cystine di-Me ester to provide cystinophanes I through 1+1, 2+2, and 3+3 cyclization, resp., or with cystine bis-dipeptides leading to 1+1 cystine-based peptidocyclophanes II. 1H NMR and CD studies have shown these cystinophanes to adopt a  $\beta$ -turn-like structure in solution X-ray crystal structure of I (X = CH, n = 2) shows a collapsed ring conformation with a near parallel face-to-face orientation of aromatic rings, a feature also suggested by NMR studies. The propensity of cystinocyclophanes to adopt  $\beta$ -turn-type conformation is attributed to the presence of S-S linkage and the need to maintain a near orthogonal value of its torsion angle. The potential of cystinophanes to serve as artificial receptors in mol. recognition and host-guest complexation studies has been demonstrated with 26-membered, pyridine-bridged macrocycle I (X = N, n = 2) which binds (1H NMR) to a number of  $\alpha,\omega$ -alkanedicarboxylic acids HO<sub>2</sub>C(CH<sub>2</sub>)<sub>m</sub>CO<sub>2</sub>H (m = 1- 4), and shows maximum affinity (K<sub>assoc</sub> = 3.69 + 10<sup>2</sup> M<sup>-1</sup>) and selectivity for glutaric acid (m = 3).
- IT 93394-80-0P 204383-31-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation, crystal structure, mol. recognition, and conformational studies of novel aromatic-bridged cystine cyclopeptides (cystinophanes))
- RN 93394-80-0 CAPLUS
- CN L-Cysteine, N-[(1,1-dimethylethoxy)carbonyl]-L-phenylalanyl-, methyl ester, bimol. (2 $\rightarrow$ 2')-disulfide (9CI) (CA INDEX NAME)

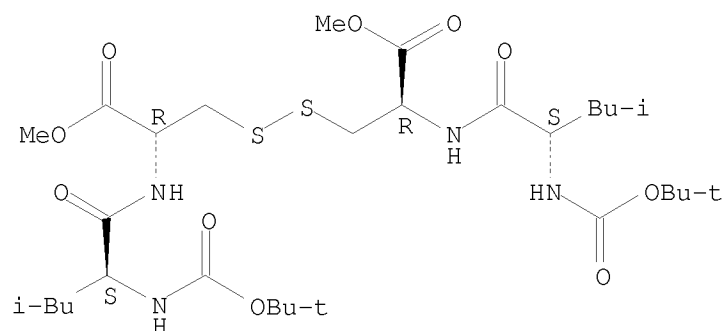
Absolute stereochemistry.



RN 204383-31-3 CAPLUS

CN L-Cysteine, N-[(1,1-dimethylethoxy)carbonyl]-L-leucyl-, methyl ester, bimol. (2→2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 59 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:250553 CAPLUS

DOCUMENT NUMBER: 129:28195

ORIGINAL REFERENCE NO.: 129:6019a,6022a

TITLE: Preparation of fluorescence quenched libraries containing interchain disulfide bonds for studies of protein disulfide isomerases

AUTHOR(S): Spetzler, Jane C.; Westphal, Vibeke; Winther, Jakob R.; Meldal, Morten

CORPORATE SOURCE: Carlsberg Laboratory, Department of Chemistry, Valby, DK-2500, Den.

SOURCE: Journal of Peptide Science (1998), 4(2), 128-137  
CODEN: JPSIEI; ISSN: 1075-2617

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Protein disulfide isomerase is an enzyme that catalyzes disulfide redox reactions in proteins. Fluorogenic and interchain disulfide bond containing peptide libraries and suitable substrates, useful in the study of protein disulfide isomerase, were prepared. In order to establish the chemical required for the generation of a split-synthesis library, two substrates containing an interchain disulfide bond, a fluorescent probe and a quencher were synthesized. The library consists of a Cys residue flanked by randomized amino acid residues at both sides and the fluorescent Abz group at the amino terminal. All the 20 natural amino acids except Cys were employed. The library was linked to PEGA-beads via methionine so that the peptides

could be selectively removed from the resin by cleavage with CNBr. A disulfide bridge was formed between the bead-linked library and a peptide containing the quenching chromophore [Tyr(NO<sub>2</sub>)] and Cys(pNpys) activated for reaction with a second thiol. The formation and cleavage of the interchain disulfide bonds in the library were monitored under a fluorescence microscope. Substrates to investigate the properties of protein disulfide isomerase in solution were also synthesized.

IT 208114-89-0P 208114-92-5DP, polymer-bound  
 208115-04-2P 208115-10-0DP, polymer-bound  
 208115-73-5P 208115-77-9P 208115-80-4P  
 208115-83-7P 208115-87-1P 208115-90-6P  
 208115-93-9P 208115-96-2P 208116-00-1P  
 208116-03-4P 208116-06-7P 208116-08-9P  
 208116-10-3P 208116-12-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

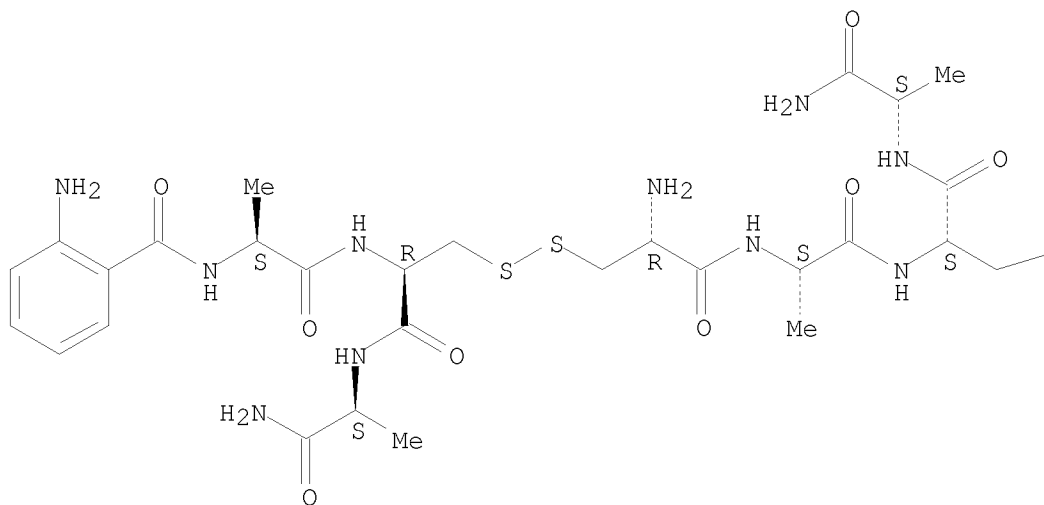
(preparation of fluorescence quenched peptide libraries containing interchain disulfide bonds for studies of protein disulfide isomerases)

RN 208114-89-0 CAPLUS

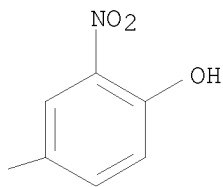
CN L-Alaninamide, L-cysteinyl-L-alanyl-3-nitro-L-tyrosyl-, (1→2')-disulfide with N-(2-aminobenzoyl)-L-alanyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

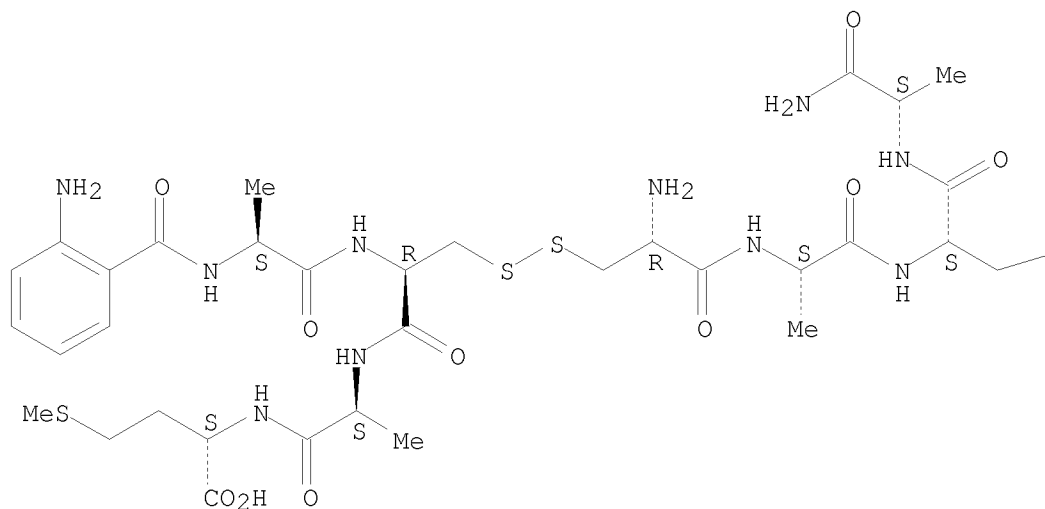


RN 208114-92-5 CAPLUS

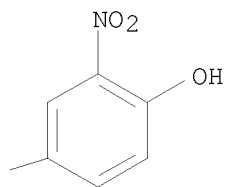
CN L-Methionine, N-(2-aminobenzoyl)-L-alanyl-L-cysteinyl-L-alanyl-,  
(2→1')-disulfide with L-cysteinyl-L-alanyl-3-nitro-L-tyrosyl-L-  
alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



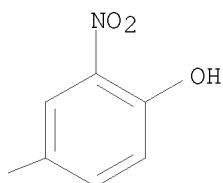
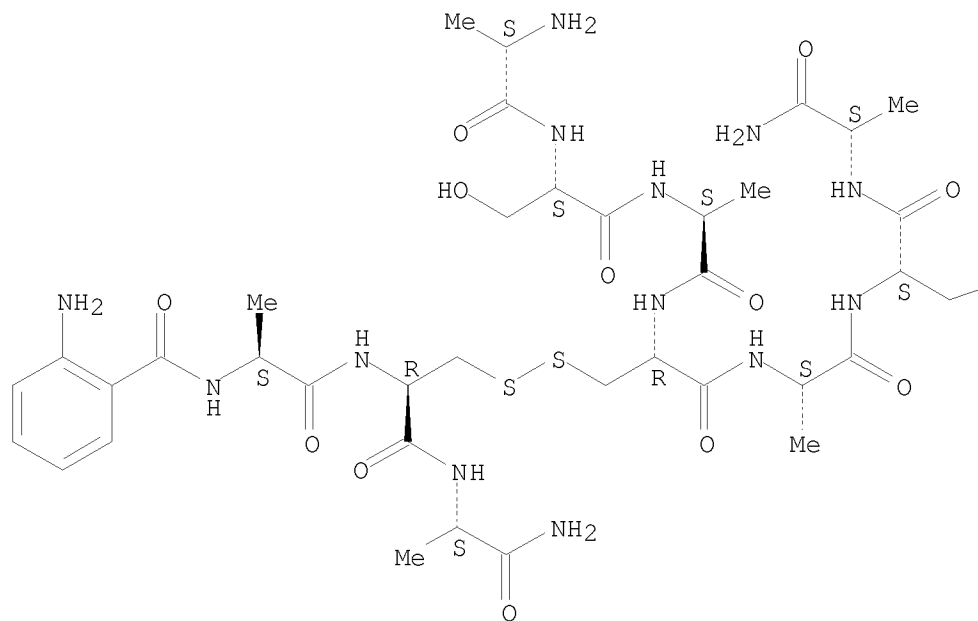
PAGE 1-B



RN 208115-04-2 CAPLUS

CN L-Alaninamide, L-alanyl-L-seryl-L-alanyl-L-cysteinyl-L-alanyl-3-nitro-L-  
tyrosyl-, (4→2')-disulfide with N-(2-aminobenzoyl)-L-alanyl-L-  
cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

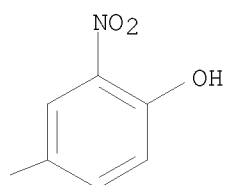
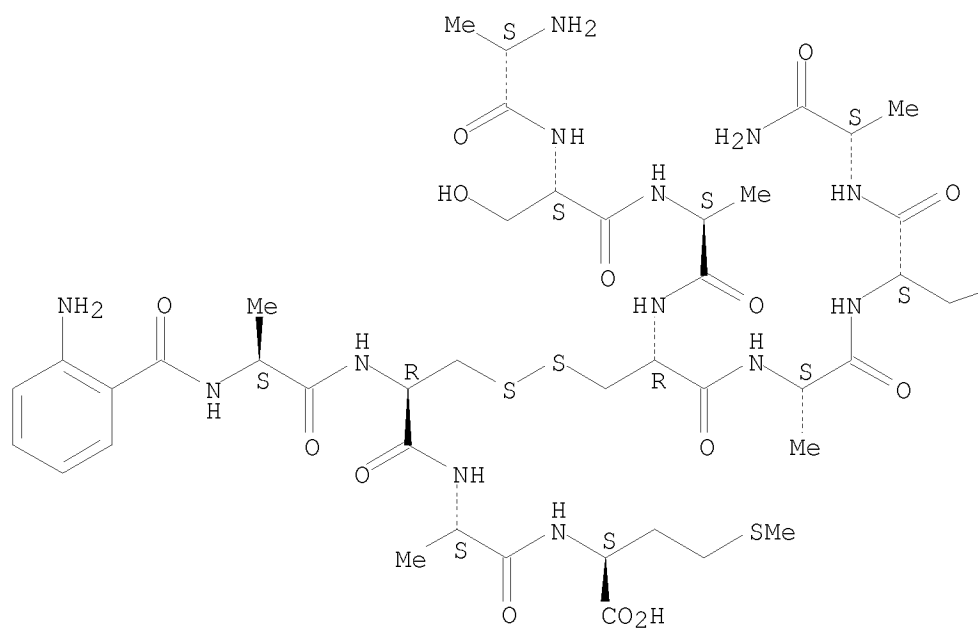
Absolute stereochemistry.



RN 208115-10-0 CAPLUS

CN L-Alaninamide, L-alanyl-L-seryl-L-alanyl-L-cysteinyl-L-alanyl-3-nitro-L-tyrosyl-, (4→2')-disulfide with N-(2-aminobenzoyl)-L-alanyl-L-cysteinyl-L-alanyl-L-methionine (9CI) (CA INDEX NAME)

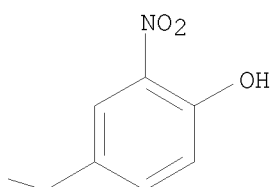
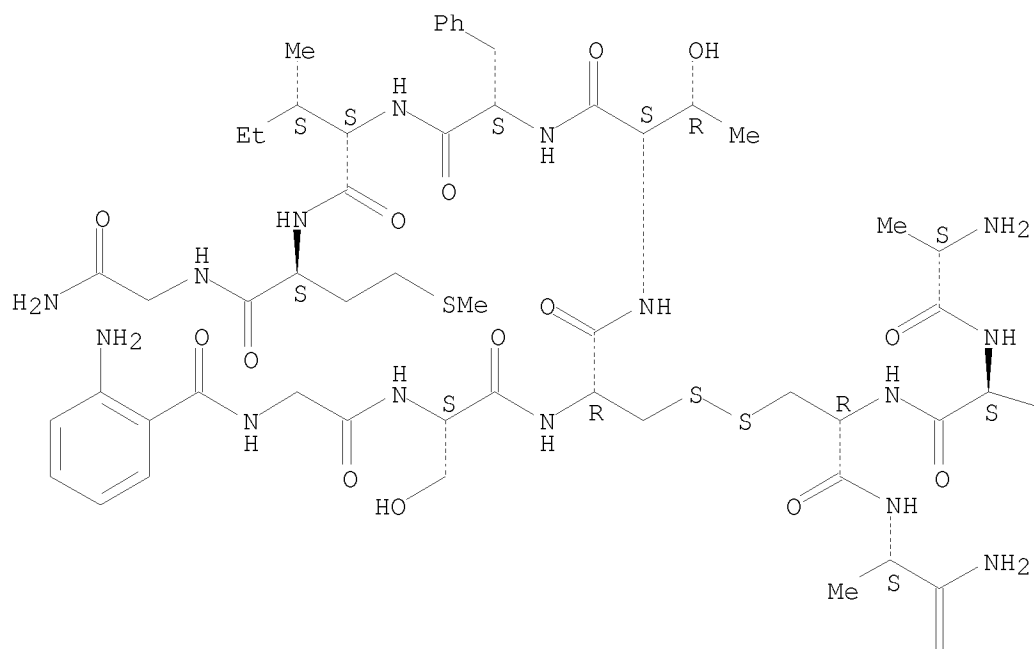
Absolute stereochemistry.



RN 208115-73-5 CAPLUS  
 CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-seryl-L-cysteinyl-L-threonyl-L-phenylalanyl-L-isoleucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

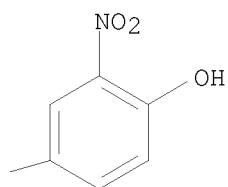
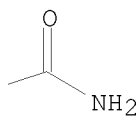
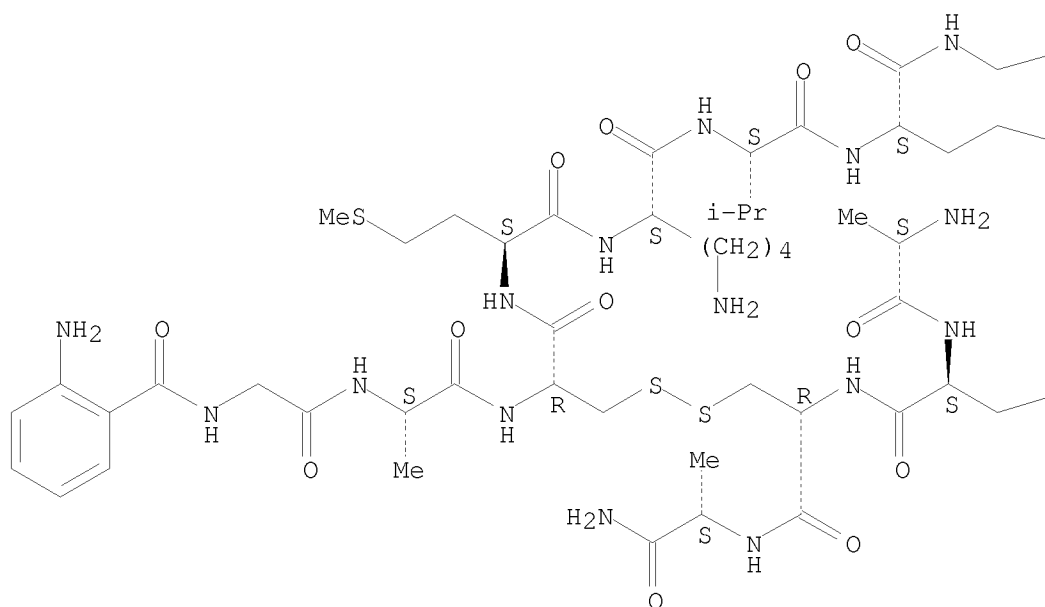
Absolute stereochemistry.





RN 208115-77-9 CAPLUS  
 CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-alanyl-L-cysteinyl-L-methionyl-L-lysyl-L-valyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

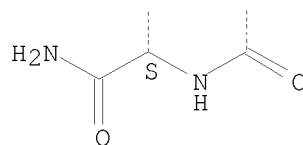
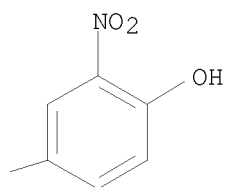
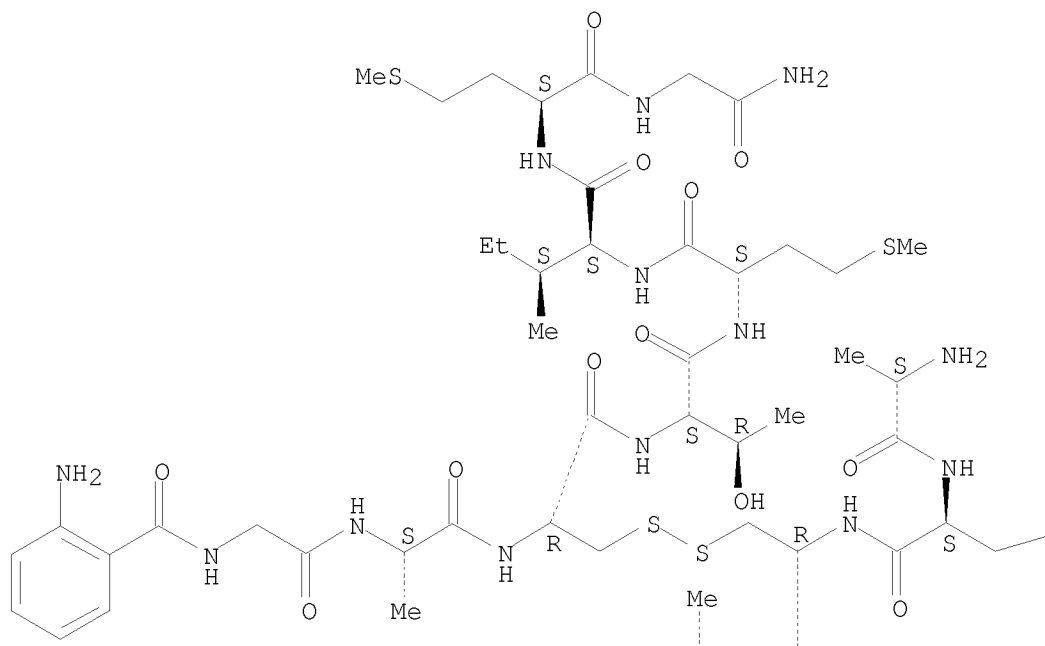
Absolute stereochemistry.



RN 208115-80-4 CAPLUS

CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-alanyl-L-cysteinyl-L-threonyl-L-methionyl-L-isoleucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

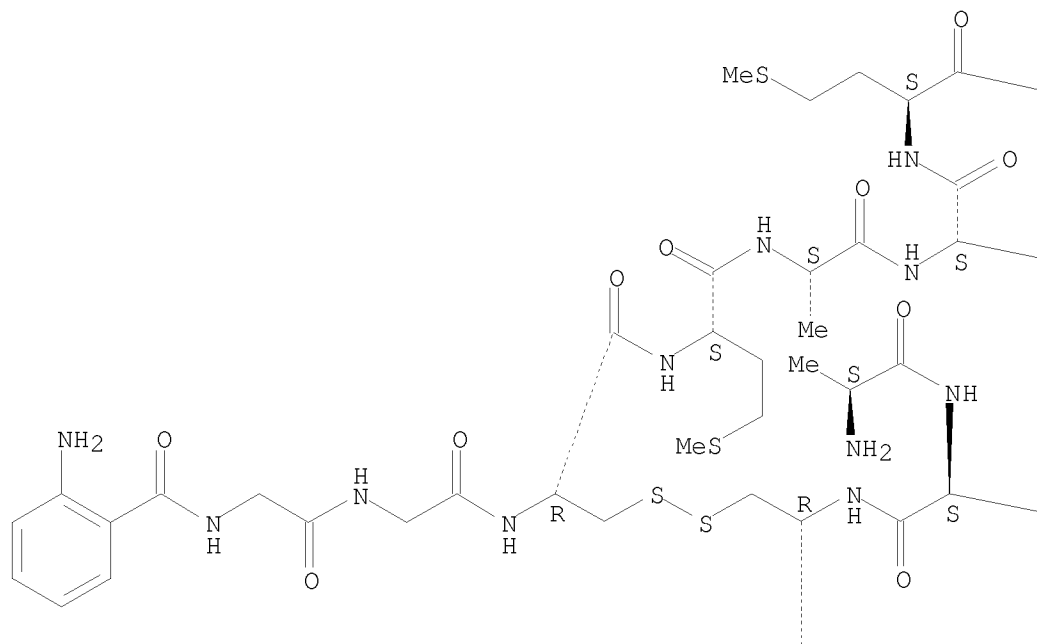


RN 208115-83-7 CAPLUS  
 CN Glycinamide, N-(2-aminobenzoyl)glycylglycyl-L-cysteinyl-L-methionyl-L-

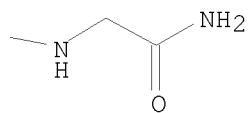
alanyl-L-leucyl-L-methionyl-, (3→3')-disulfide with  
 L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.

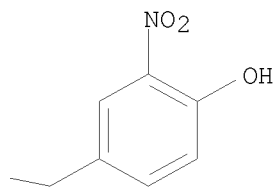
PAGE 1-A

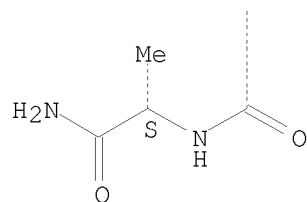


PAGE 1-B



-Bu-i

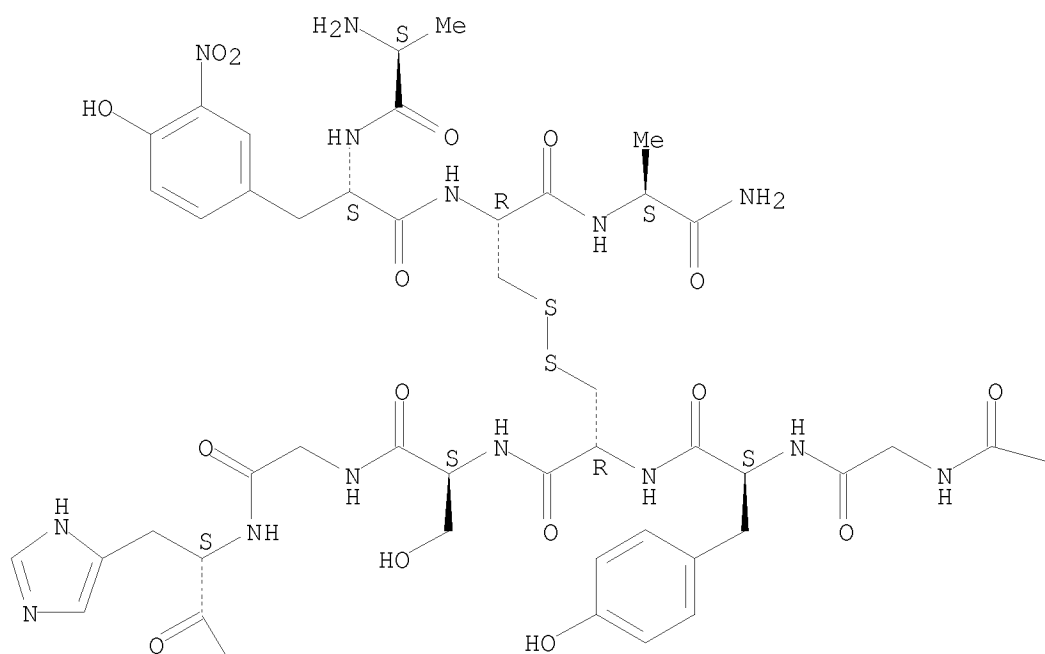


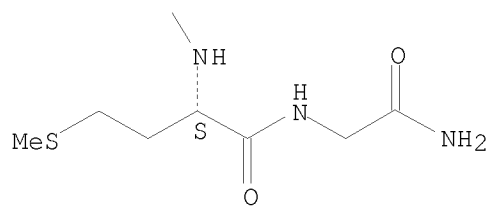
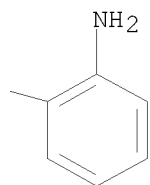


RN 208115-87-1 CAPLUS

CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-tyrosyl-L-cysteinyll-serylglycyl-L-histidyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyll-L-alaninamide (9CI) (CA INDEX NAME)

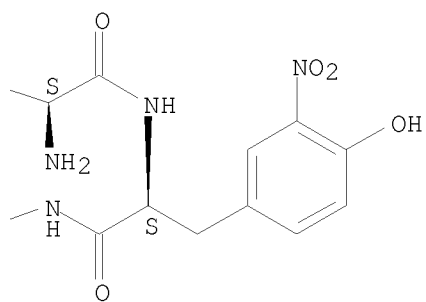
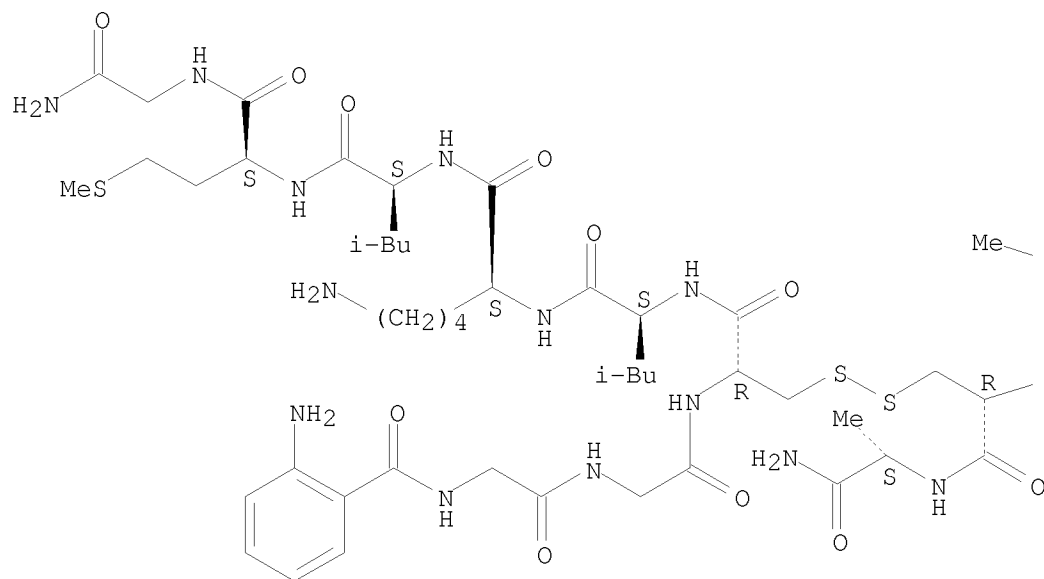
Absolute stereochemistry.





RN 208115-90-6 CAPLUS  
 CN Glycinamide, N-(2-aminobenzoyl)glycylglycyl-L-cysteinyl-L-leucyl-L-lysyl-L-leucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

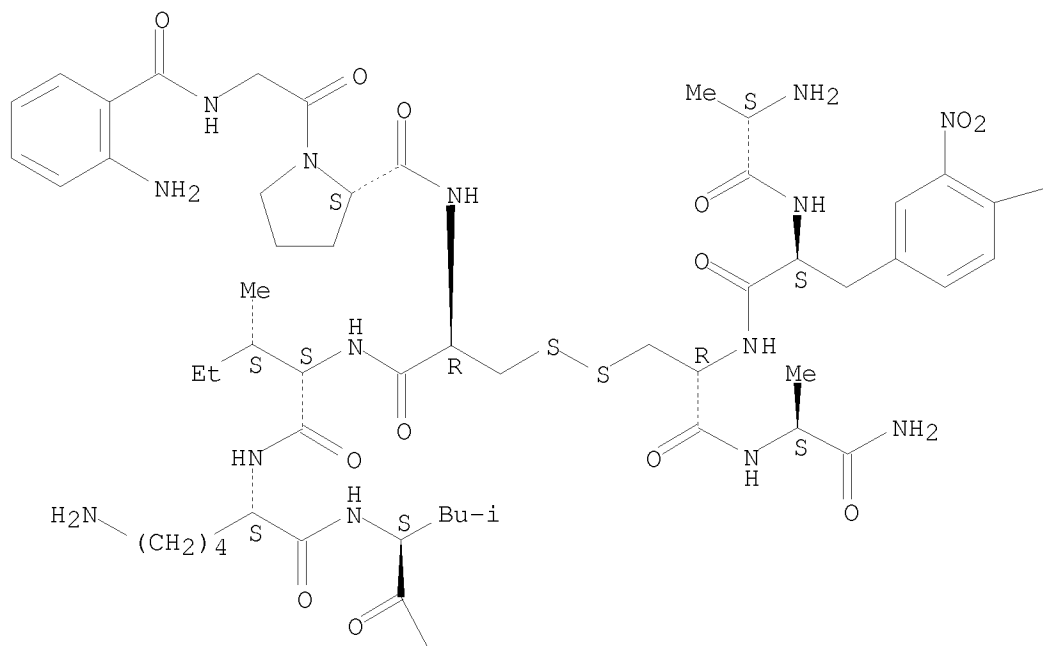
Absolute stereochemistry.



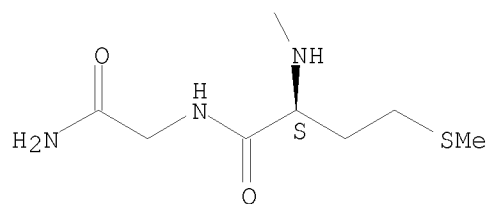
RN 208115-93-9 CAPLUS

CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-prolyl-L-cysteinyl-L-isoleucyl-L-lysyl-L-leucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



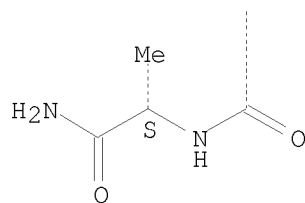
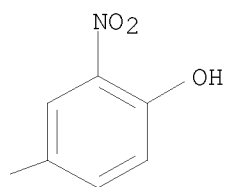
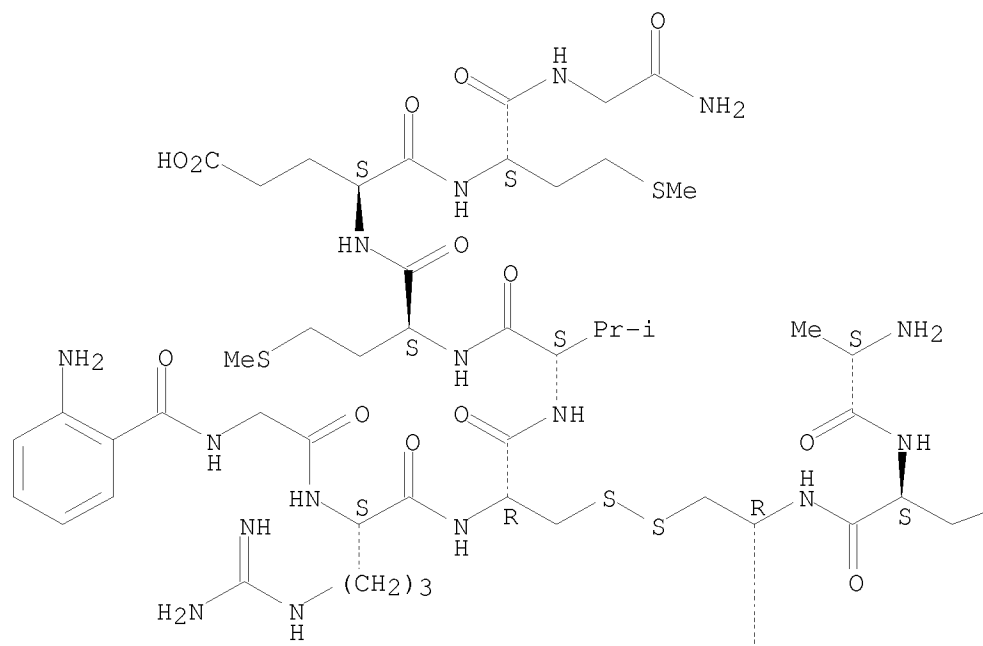
—OH



RN 208115-96-2 CAPLUS  
 CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-arginyl-L-cysteinyl-L-valyl-L-methionyl-L- $\alpha$ -glutamyl-L-methionyl-, (3 $\rightarrow$ 3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

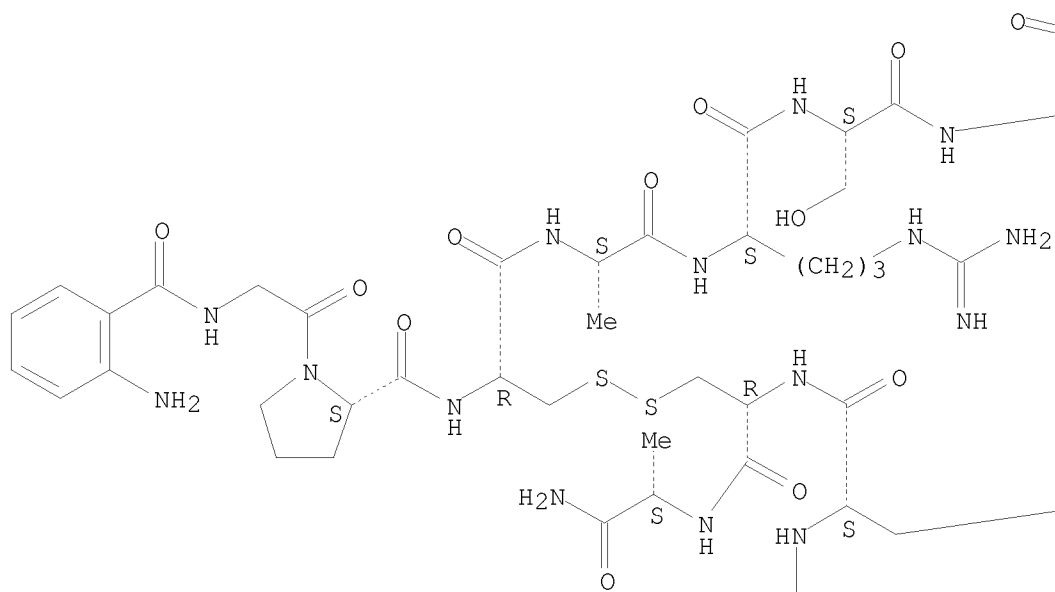




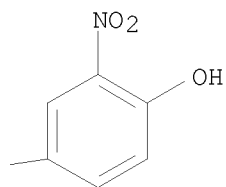
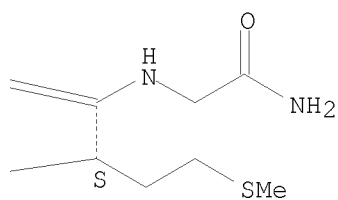
CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-prolyl-L-cysteinyl-L-alanyl-L-  
 arginyl-L-seryl-L-methionyl-, (3→3')-disulfide with  
 L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX  
 NAME)

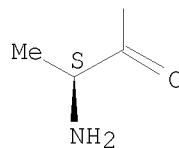
Absolute stereochemistry.

PAGE 1-A



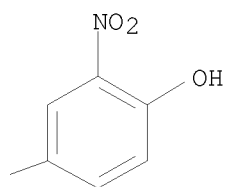
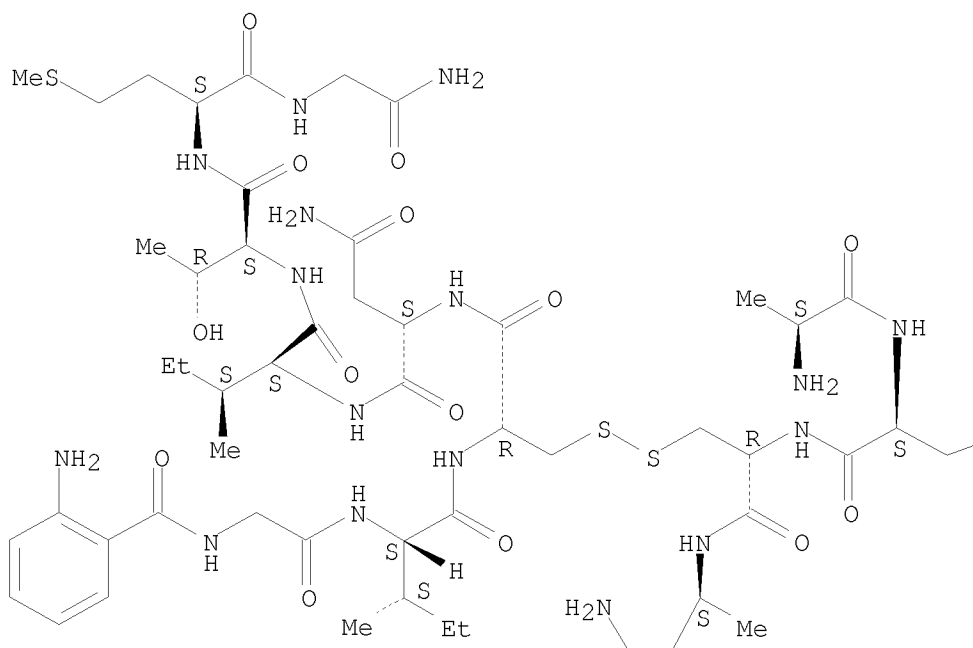
PAGE 1-B





RN 208116-03-4 CAPLUS  
 CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-isoleucyl-L-cysteinyl-L-asparaginyl-L-isoleucyl-L-threonyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

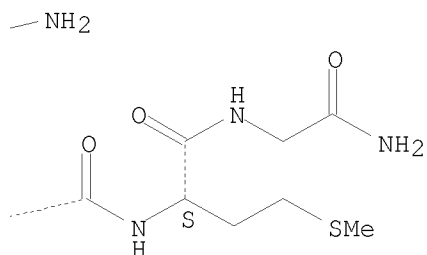
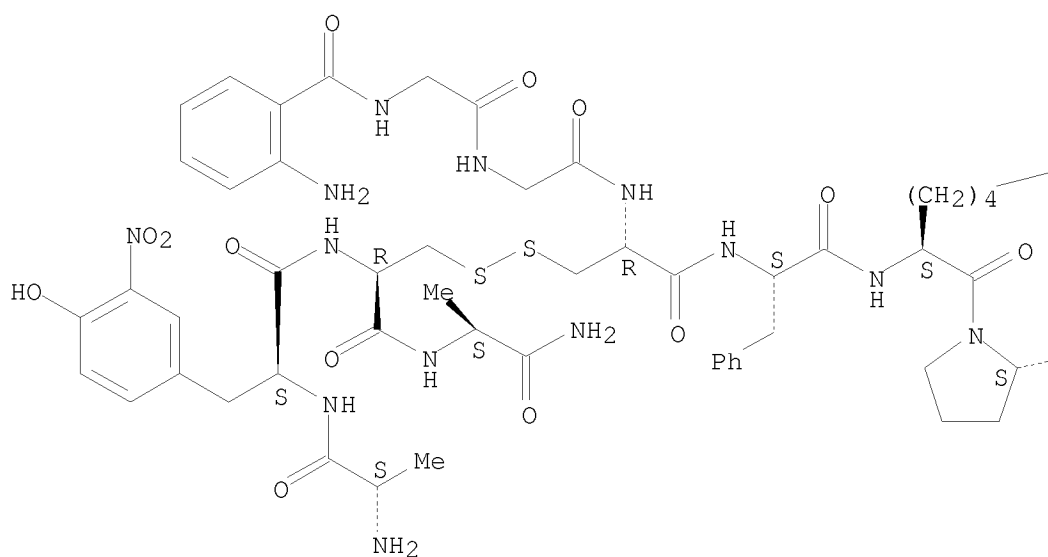




RN 208116-06-7 CAPLUS

CN Glycinamide, N-(2-aminobenzoyl)glycylglycyl-L-cysteinyl-L-phenylalanyl-L-lysyl-L-prolyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



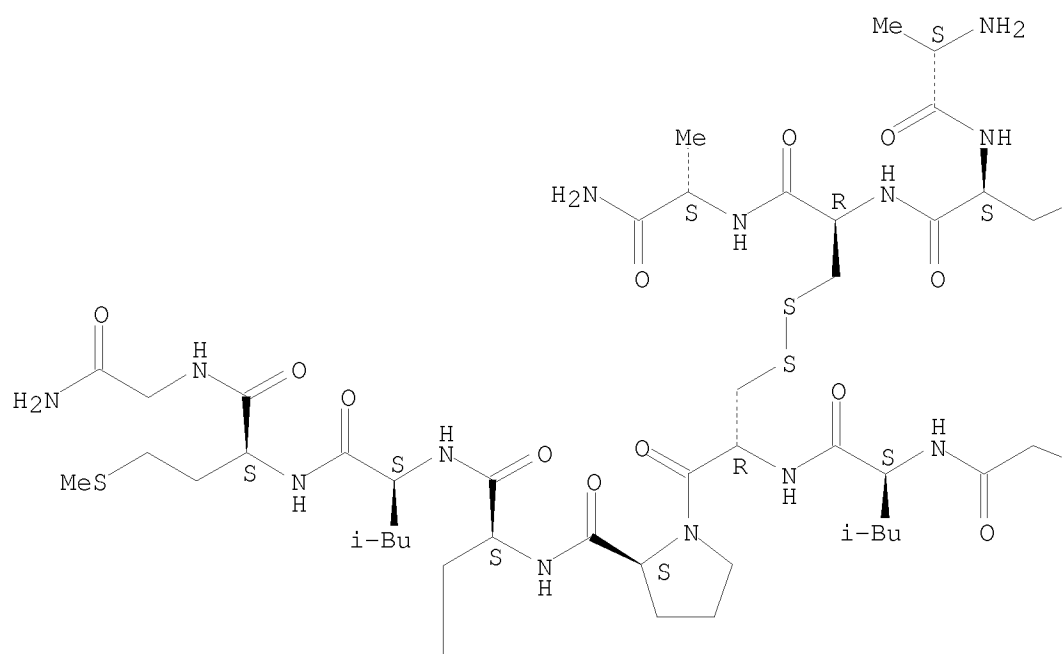
RN 208116-08-9 CAPLUS

CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-leucyl-L-cysteinyl-L-prolyl-L-histidyl-L-leucyl-L-methionyl-, (3→3')-disulfide with

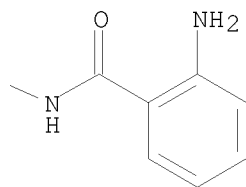
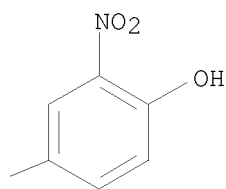
L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

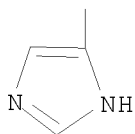
Absolute stereochemistry.

PAGE 1-A



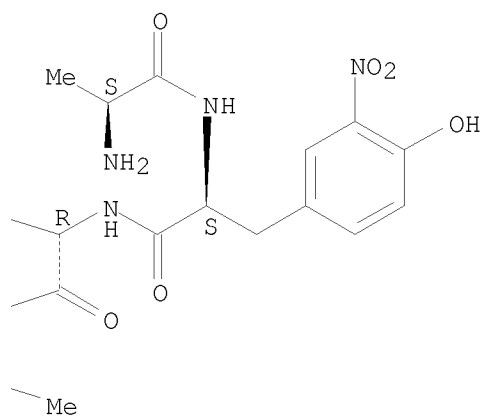
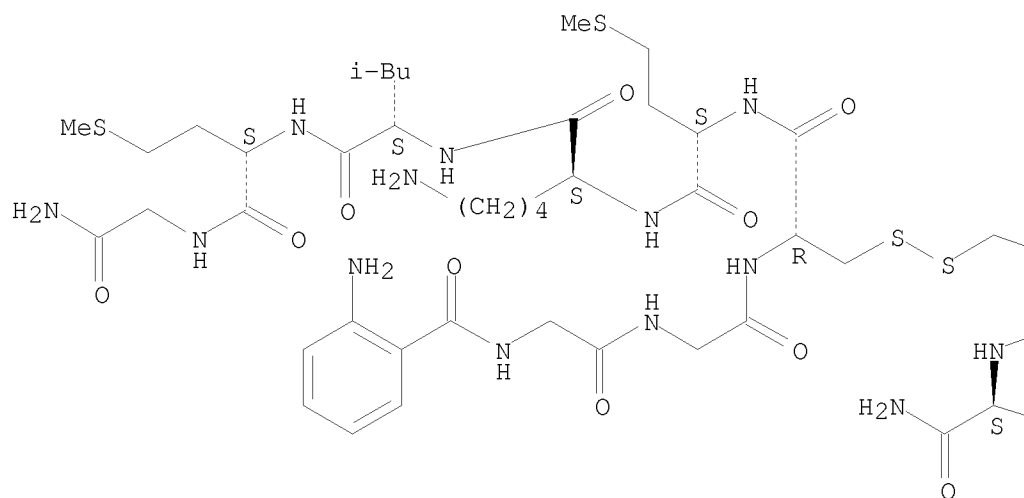
PAGE 1-B





RN 208116-10-3 CAPLUS  
 CN Glycinamide, N-(2-aminobenzoyl)glycylglycyl-L-cysteinyl-L-methionyl-L-lysyl-L-leucyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

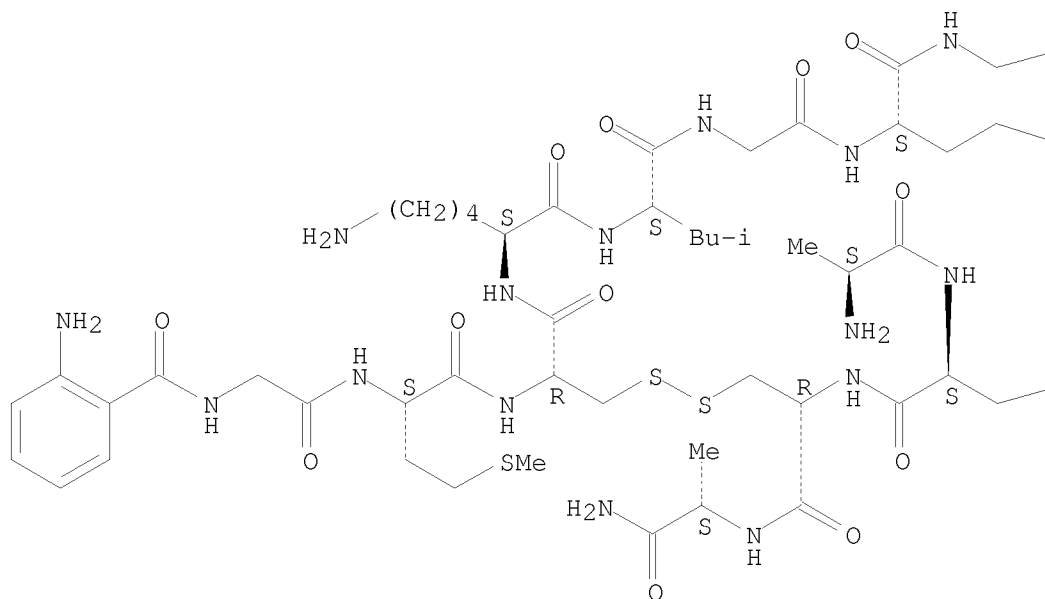


RN 208116-12-5 CAPLUS  
 CN Glycinamide, N-(2-aminobenzoyl)glycyl-L-methionyl-L-cysteinyl-L-lysyl-L-leucylglycyl-L-methionyl-, (3→3')-disulfide with L-alanyl-3-nitro-L-tyrosyl-L-cysteinyl-L-alaninamide (9CI) (CA INDEX NAME)

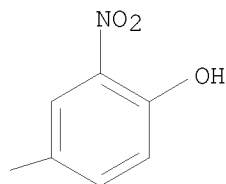
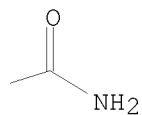
NAME)

Absolute stereochemistry.

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PAGE 1-B



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 60 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:222831 CAPLUS  
DOCUMENT NUMBER: 128:234771  
ORIGINAL REFERENCE NO.: 128:46369a, 46372a  
TITLE: Photochemical production of carbon disulfide in seawater  
AUTHOR(S): Xie, Huixiang; Moore, Robert M.; Miller, William L.  
CORPORATE SOURCE: Department of Oceanography, Dalhousie University,

Halifax, NS, Can.

SOURCE: Journal of Geophysical Research, [Oceans] (1998),  
103(C3), 5635-5644  
CODEN: JGRCEY; ISSN: 0148-0227

PUBLISHER: American Geophysical Union

DOCUMENT TYPE: Journal

LANGUAGE: English

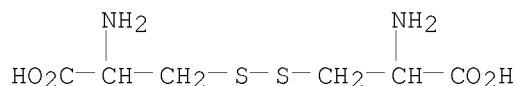
AB It is generally accepted that the ocean is an important source for atmospheric CS<sub>2</sub>, which makes a major contribution to the formation of COS in the atmospheric

The processes producing CS<sub>2</sub> in seawater, however, are essentially unknown. We report for the 1st time to our knowledge that marine photochem. reactions are identified as a significant source for oceanic CS<sub>2</sub>. Apparent quantum yield spectra of CS<sub>2</sub> production were obtained using water samples from the northeast Atlantic. Results indicate that it is mainly UV solar radiation (290-340 nm) which is responsible for CS<sub>2</sub> photoprodn. The photoprodn. rate of CS<sub>2</sub> is pos. correlated with absorbance at 350 nm, suggesting that the reactions are mediated by chromophoric dissolved organic matter (CDOM). Laboratory irradiations have confirmed that cysteine and cystine are efficient precursors of CS<sub>2</sub> and that OH radicals are likely to be important intermediates. Both the field survey and laboratory work point to similar mechanisms for photochem. production of CS<sub>2</sub> and COS in marine waters. A CS<sub>2</sub> production rate of 0.49 Tg/yr for the world oceans has been estimated using the quantum yield spectra from this work and the sea surface light field provided by Leifer (1988). This estimate is of the same order of magnitude as the present estimate of the CS<sub>2</sub> flux from the ocean to the atmospheric based on surface saturation and wind speed.

IT 923-32-0, Cystine  
RL: GOC (Geological or astronomical occurrence); OCCU (Occurrence)  
(photochem. production of carbon disulfide in seawater)

RN 923-32-0 CAPLUS

CN Cystine (CA INDEX NAME)



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 61 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:221394 CAPLUS

DOCUMENT NUMBER: 128:205073

ORIGINAL REFERENCE NO.: 128:40566h,40567a

TITLE: Solid-Phase Enzymic Synthesis of a Sialyl Lewis X Tetrasaccharide on a Sepharose Matrix

AUTHOR(S): Blixt, O.; Norberg, T.

CORPORATE SOURCE: Department of Chemistry, Swedish University of Agricultural Sciences, Uppsala, S-750 07, Swed.

SOURCE: Journal of Organic Chemistry (1998), 63(8), 2705-2710  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

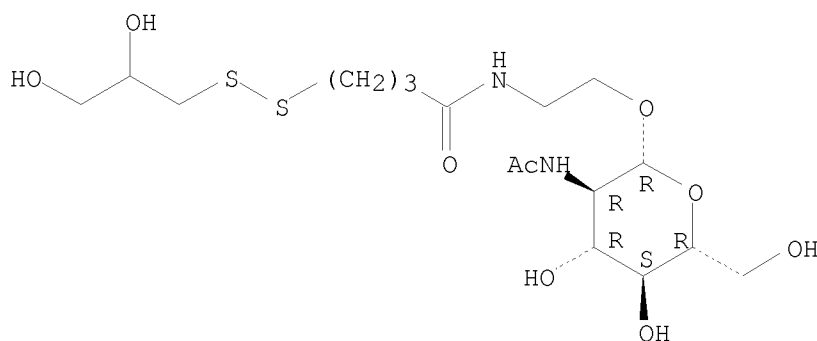
AB Thiopyridyl sepharoses with different linker arm lengths were prepared from epoxy sepharose 6B by reaction first with 1,8-diamino-3,6-dioxaoctane and then with, successively, diethoxy-3-cyclobutene-1,2-dione (squaric acid di-Et ester) and 1,8-diamino-3,6-dioxaoctane in several cycles, followed by reaction of the obtained amino sepharoses with, successively,



thiobutyrolactone and 2,2'-dithiopyridine. The thiopyridyl sepharoses were reacted with the glucosamine derivative 2-(3'-mercaptobutyrylamido)ethyl 2-acetamido-2-deoxy- $\beta$ -D-glucopyranoside, giving GlcNAc sepharoses with different linker lengths. Enzymic galactosylation of these with  $\beta$ -(1-4)-galactosyltransferase and UDP-galactose gave yields varying between 70 and 98%, and there was a clear correlation between linker length and yield. A GlcNAc sepharose with a long linker was then used in a solid-phase synthesis of a sialyl Lex tetrasaccharide. The three required enzymes (galactosyl-, sialyl, and fucosyltransferase) and nucleotide sugars were reacted consecutively with the GlcNAc sepharose, giving, after cleavage from sepharose with DTT, the free sialyl Lex tetrasaccharide derivative in a 57% total yield after purification

IT 204004-67-1DP, Sepharose 6B bound  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (solid-phase enzymic synthesis of a sialyl Lewisx tetrasaccharide on a sepharose matrix)  
 RN 204004-67-1 CAPLUS  
 CN Butanamide, N-[2-[[2-(acetylamino)-2-deoxy- $\beta$ -D-glucopyranosyl]oxy]ethyl]-4-[(2,3-dihydroxypropyl)dithio]- (CA INDEX NAME)

Absolute stereochemistry.

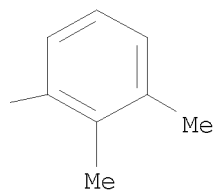


REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 62 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:220858 CAPLUS  
 DOCUMENT NUMBER: 128:270614  
 ORIGINAL REFERENCE NO.: 128:53569a,53572a  
 TITLE: Preparation of acylpiperazines and related compounds as inhibitors of farnesyl-protein transferase.  
 INVENTOR(S): Graham, Samuel L.; Williams, Theresa M.  
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
 SOURCE: U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 237,586, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

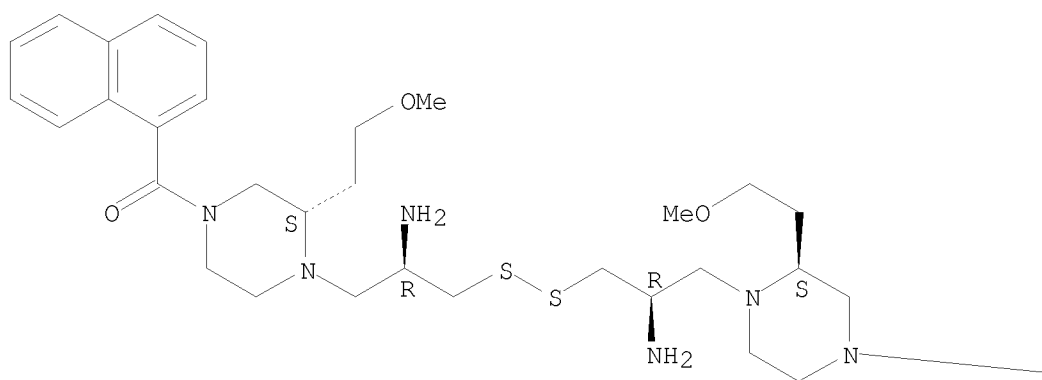
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5736539	A	19980407	US 1995-549829	19951116
WO 9500497	A1	19950105	WO 1994-US5634	19940519
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, GE, HU, JP, KG, KR, KZ, LK, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SI, SK, TJ, TT, UA,				



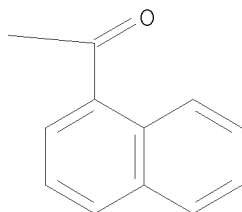


RN 187268-18-4 CAPLUS  
 CN 1-Piperazineethanamine,  $\alpha, \alpha'$ -[dithiobis(methylene)]bis[2-(2-methoxyethyl)-4-(1-naphthalenylcarbonyl)-, tetrahydrochloride, [2S-[1[S\*(S\*(R\*))]],2R\*]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

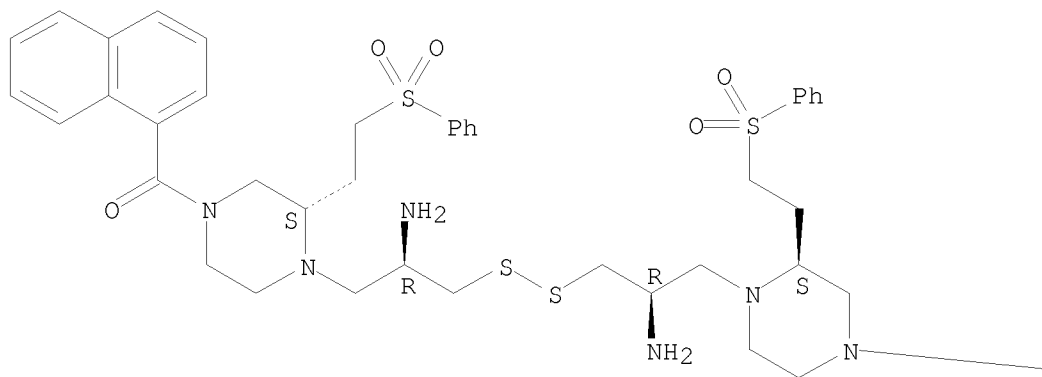


● 4 HCl

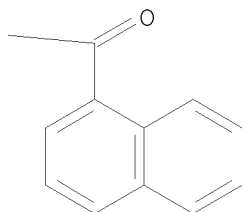


RN 187268-19-5 CAPLUS  
 CN 1-Piperazineethanamine,  $\alpha,\alpha'$ -[dithiobis(methylene)]bis[4-(1-naphthalenylcarbonyl)-2-[2-(phenylsulfonyl)ethyl]-, tetrahydrochloride, [2S-[1[S\*[S\*(R\*)]],2R\*]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

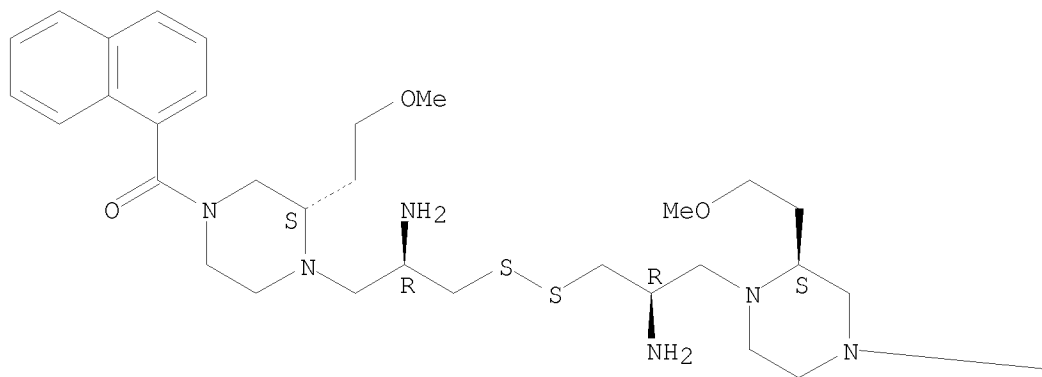


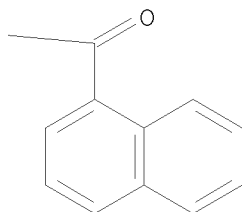
● 4 HCl



RN 205679-17-0 CAPLUS  
 CN 1-Piperazineethanamine,  $\alpha,\alpha'$ -[dithiobis(methylene)]bis[2-(2-methoxyethyl)-4-(1-naphthalenylcarbonyl)-, [2S-[1[S\*[S\*(R\*)]]],2R\*]]- (9CI)  
 (CA INDEX NAME)

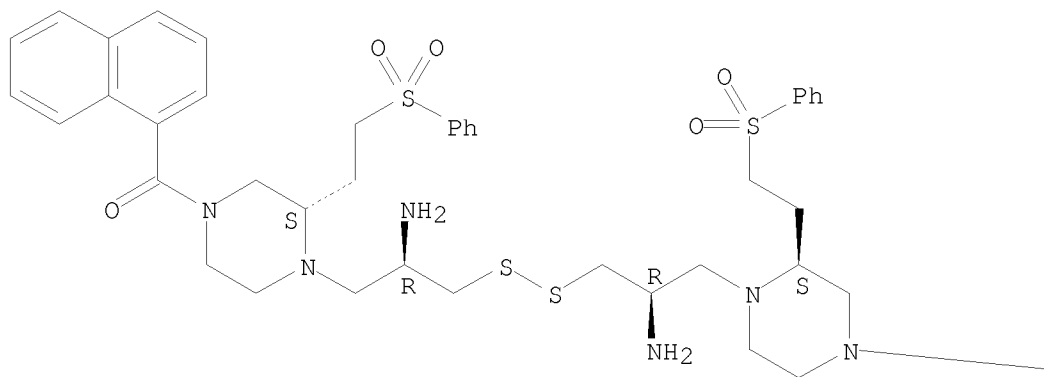
Absolute stereochemistry.

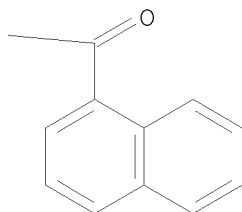




RN 205679-19-2 CAPLUS  
 CN 1-Piperazineethanamine,  $\alpha,\alpha'$ -[dithiobis(methylene)]bis[4-(1-naphthalenylcarbonyl)-2-[2-(phenylsulfonyl)ethyl]-, [2S-[1[S\*[S\*(R\*)]],2R\*]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 63 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:215024 CAPLUS

DOCUMENT NUMBER: 128:252496

ORIGINAL REFERENCE NO.: 128:49831a, 49834a

TITLE: Comparative bioavailability of various thiamine derivatives after oral administration

AUTHOR(S): Greb, A.; Bitsch, R.

CORPORATE SOURCE: Dep. Human Nutrition, Inst. Nutrition Environment, Friedrich Schiller Univ., Jena, D-07743, Germany

SOURCE: International Journal of Clinical Pharmacology and Therapeutics (1998), 36(4), 216-221

CODEN: ICTHEK; ISSN: 0946-1965

PUBLISHER: Dustri-Verlag Dr. Karl Feistle

DOCUMENT TYPE: Journal

LANGUAGE: English

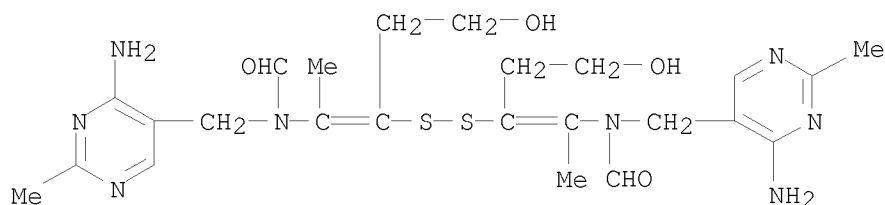
AB The bioequivalence of 3 thiamine preps., used as neurotropic agents for the treatment of polyneuropathies, was tested. After benfotiamine ingestion a more rapid and earlier increase of thiamine in blood plasma and hemolyzate was observed in contrast to fursultiamin and thiamindisulfide. Thiamine bioavailability was improved from benfotiamine compared with the other preps. The lowest bioavailability was detected with thiamindisulfide. Thus, oral administration of benfotiamine is the best agent owing to its excellent absorption characteristics.

IT 67-16-3, Thiamindisulfide

RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (bioavailability of thiamine derivs. after oral administration)

RN 67-16-3 CAPLUS

CN Formamide, N,N'-[dithiobis[2-(2-hydroxyethyl)-1-methyl-2,1-ethenediyl]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]- (CA INDEX NAME)



L27 ANSWER 64 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:214557 CAPLUS  
 DOCUMENT NUMBER: 129:9988  
 ORIGINAL REFERENCE NO.: 129:2095a,2098a  
 TITLE: Electrolytic stripping agent, stripping solution, and electrolytic stripping method of silver.  
 INVENTOR(S): Nishihama, Yukio; Oozeki, Norio; Ishii, Seiichi; Yoshikawa, Shuichi  
 PATENT ASSIGNEE(S): Okuno Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

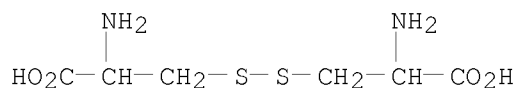
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10088400	A	19980407	JP 1996-241955	19960912

PRIORITY APPLN. INFO.: JP 1996-241955 19960912

AB The title agent comprises an aldonolactone compound such as gluconodeltalactone. Addnl., the agent may contain a fatty aminocarboxylic acid (or its salt), a fatty organic acid (or its salt), and/or a nonionic surfactant such as polyethylene glycol. A stable stripping solution free of a cyan compound contains the above agent. An electrolytic stripping method of silver involves dipping a substrate (anode) to be stripped in the above solution (pH=5-14) and carrying out electrolysis at 10-80 °C and at a c.d. 0.5-10 A/dm<sup>2</sup>. The method is useful for stripping in fabricating a lead frame.

IT 923-32-0, Cystine  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (silver electrolytic stripping agents containing)

RN 923-32-0 CAPLUS  
 CN Cystine (CA INDEX NAME)



L27 ANSWER 65 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:214556 CAPLUS  
 DOCUMENT NUMBER: 129:9987  
 ORIGINAL REFERENCE NO.: 129:2095a,2098a  
 TITLE: Electrolytic stripping agent, stripping solution, and electrolytic stripping method of silver.  
 INVENTOR(S): Mishihama, Yukio; Oozeki, Norio; Ishii, Seiichi; Yoshikawa, Shuichi  
 PATENT ASSIGNEE(S): Okuno Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.



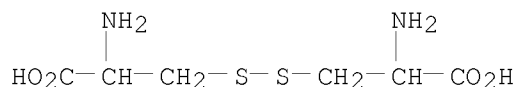
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10088398	A	19980407	JP 1996-240100	19960911
PRIORITY APPLN. INFO.:			JP 1996-240100	19960911

AB The title agent comprises  $\geq 1$  of a fatty aminocarboxylic acid or its salt. Addnl., the agent may contain a fatty organic acid (or its salt), and/or a nonionic surfactant such as polyethylene glycol. A stable stripping solution free of a cyan compound contains the above agent. An electrolytic stripping method of Ag involves dipping a substrate (anode) to be stripped in the above solution (pH = 5-14) and carrying out electrolysis at 10-80° and at a c.d. 0.5-10 A/dm<sup>2</sup>. The method is useful for stripping in fabricating a lead frame.

IT 923-32-0, Cystine  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(silver electrolytic stripping agents containing)

RN 923-32-0 CAPLUS  
CN Cystine (CA INDEX NAME)



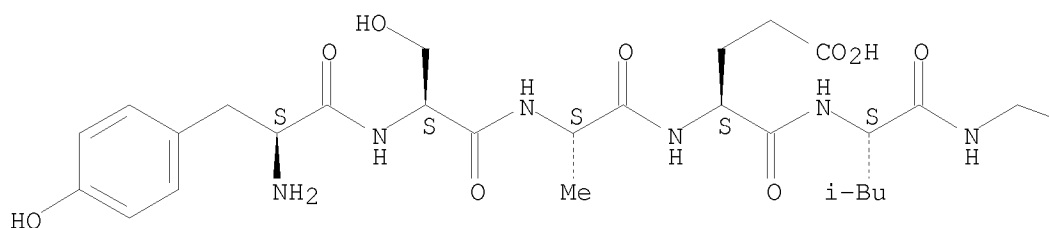
L27 ANSWER 66 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:212165 CAPLUS  
DOCUMENT NUMBER: 128:283065  
ORIGINAL REFERENCE NO.: 128:56039a, 56042a  
TITLE: Preparations of Boc-Cys(S-Pyr)-OH and Z-Cys(S-Pyr)-OH and their applications in orthogonal coupling of unprotected peptide segments  
AUTHOR(S): Huang, Haihong; Carey, Robert I.  
CORPORATE SOURCE: Department of Chemistry and the Center for Metalloenzyme Studies, University of Georgia, Athens, GA, USA  
SOURCE: Journal of Peptide Research (1998), 51(4), 290-296  
CODEN: JPERFA; ISSN: 1397-002X  
PUBLISHER: Munksgaard International Publishers Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Boc-Cys(S-Pyr)-OH and Z-Cys(S-Pyr)-OH (Pyr = 2-pyridyl) were prepared by addition of their cysteine derivs. to 3 equiv of 2,2'-dipyridyldisulfide in one portion. 2-Mercaptopyridine was removed by addition of 0.1 M Cu(NO<sub>3</sub>)<sub>2</sub> to the solution. Both derivs. are white solids and can be used to facilitate the formations of heterodisulfide bonds. Two methods of synthesizing peptides with N-terminal Cys(S-Pyr) were also provided. Two peptide thiocarboxylic acids H-Tyr-Ser-Ala-Glu-Leu-Val-SH and H-Tyr-Ser-Ala-Glu-Leu-Gly-SH were prepared on the thioester benzhydryl resin with the cleavage condition of 1.0 M TFMSA/TFA instead of HF. Orthogonal coupling of these peptide thiocarboxylic acids with H-Cys(S-Pyr)-Tyr-Ser-Glu-Leu-Ala-NH<sub>2</sub> give acyl disulfide intermediates which undergo intramol. acyl transfer to form peptides H-Tyr-Ser-Ala-Glu-Leu-Xxx-Cys-Tyr-Ser-Glu-Leu-Ala-NH<sub>2</sub> (Xxx = Val, Gly). The intermediate acyl disulfide peptides were collected by high-performance liquid chromatog. and identified by liquid chromatog.-mass spectrometry.

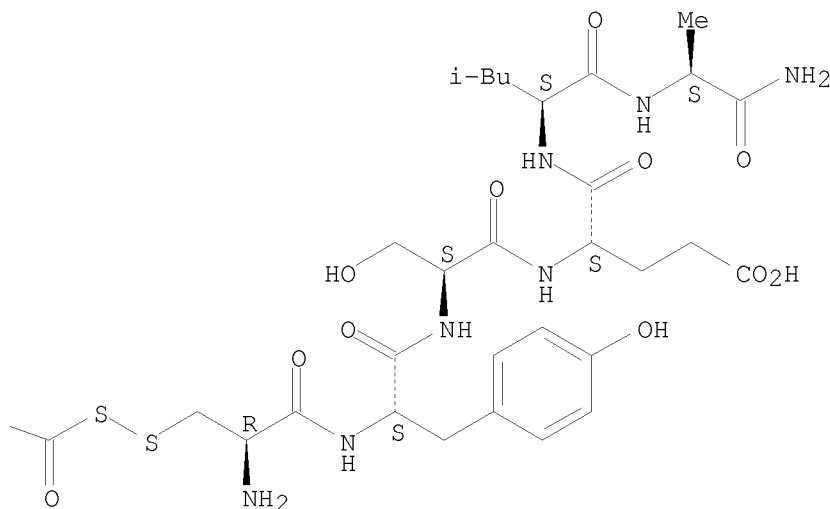
IT 205813-40-7P 205813-41-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of thiopyridyl cysteine derivs. and their applications in  
 orthogonal coupling of unprotected peptide segments)  
 RN 205813-40-7 CAPLUS  
 CN L-Alaninamide, 3-[(L-tyrosyl-L-seryl-L-alanyl-L- $\alpha$ -glutamyl-L-  
 leucylglycyl)dithio]-L-alanyl-L-tyrosyl-L-seryl-L- $\alpha$ -glutamyl-L-  
 leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



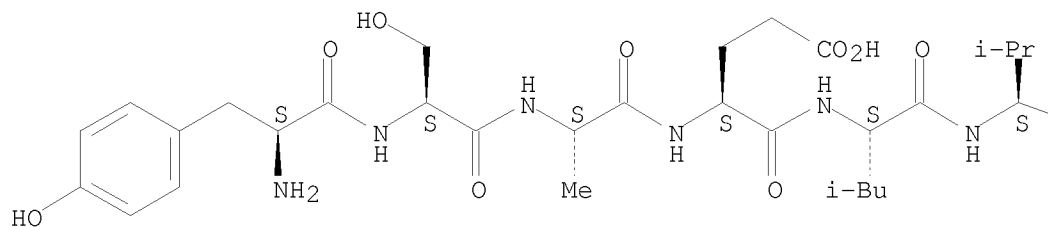
PAGE 1-B



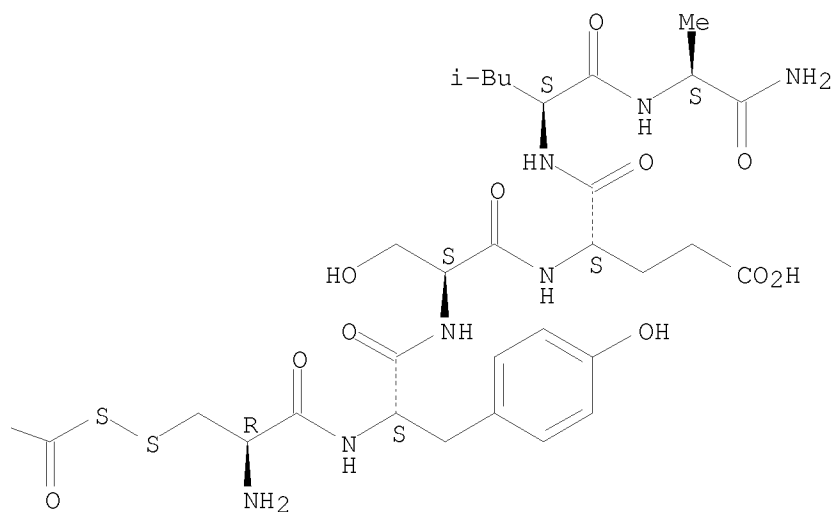
RN 205813-41-8 CAPLUS  
 CN L-Alaninamide, 3-[(L-tyrosyl-L-seryl-L-alanyl-L- $\alpha$ -glutamyl-L-leucyl-  
 L-valyl)dithio]-L-alanyl-L-tyrosyl-L-seryl-L- $\alpha$ -glutamyl-L-leucyl-  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



IT 205813-42-9P

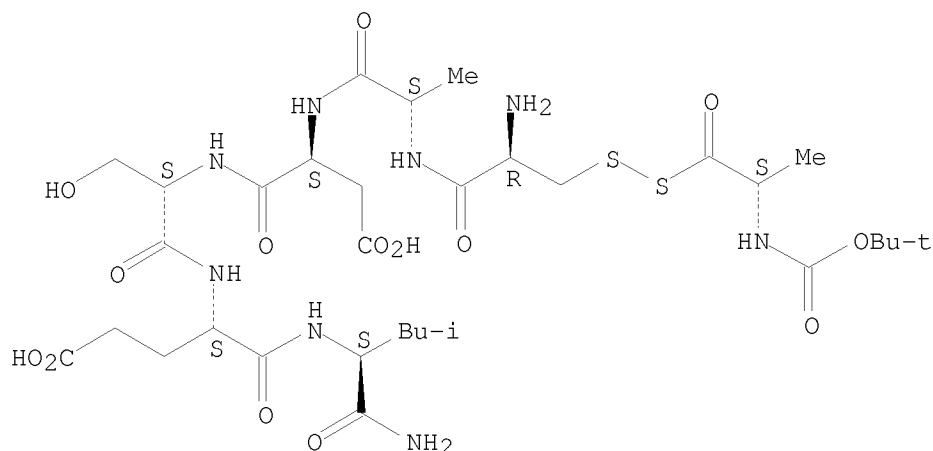
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of thiopyridyl cysteine derivs. and their applications in orthogonal coupling of unprotected peptide segments)

RN 205813-42-9 CAPLUS

CN L-Leucinamide, 3-[[[(2S)-2-[[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxopropyl]dithio]-L-alanyl-L-alanyl-L- $\alpha$ -aspartyl-L-seryl-L- $\alpha$ -glutamyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 67 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:209044 CAPLUS

DOCUMENT NUMBER: 128:317151

ORIGINAL REFERENCE NO.: 128:62693a,62696a

TITLE: The effect of enkephalin-degrading enzymes inhibitor RB-101 on recovery of conductivity in the rat injured sciatic nerve

AUTHOR(S): Kolosova, L. I.; Moiseeva, A. B.; Ryabchikova, O. V.; Akoev, G. N.

CORPORATE SOURCE: Inst. Fiziol. im. Pavlova, RAN, St.Petersburg, Russia  
SOURCE: Rossiiskii Fiziologicheskii Zhurnal imeni I. M. Sechenova (1997), 83(11-12), 74-78  
CODEN: RFZSFY

PUBLISHER: Nauka

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB A dose-dependent effect of the enkephalinase inhibitor RB-101 on functional recovery of the rat injured sciatic nerve is reported. The findings suggest the enkephalines participation in regulation of regenerative processes in peripheral nerves.

IT 203498-62-8, RB 101

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(effect of enkephalinase inhibitor RB-101 on recovery of conductivity in the rat injured sciatic nerve)

RN 203498-62-8 CAPLUS

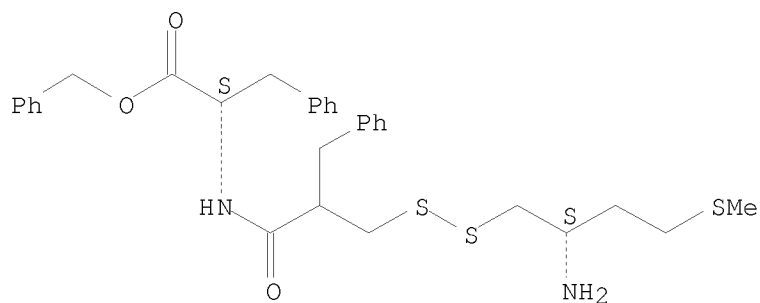
CN L-Phenylalanine, N-[2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester, methanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 135949-60-9

CMF C31 H38 N2 O3 S3

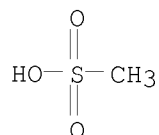
Absolute stereochemistry.



CM 2

CRN 75-75-2

CMF C H4 O3 S



L27 ANSWER 68 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:199217 CAPLUS

DOCUMENT NUMBER: 128:313498

ORIGINAL REFERENCE NO.: 128:62033a,62036a

TITLE: Solution behavior and zinc complexation of tripeptides with cysteine and/or histidine at both termini

AUTHOR(S): Gockel, P.; Gelinsky, M.; Vogler, R.; Vahrenkamp, H.

CORPORATE SOURCE: Institut für Anorganische und Analytische Chemie der Universität Freiburg, Freiburg, 79104, Germany

SOURCE: Inorganica Chimica Acta (1998), 272(1,2), 115-124

CODEN: ICHAA3; ISSN: 0020-1693

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Eight tripeptides and one tetrapeptide with cysteine and/or histidine at both termini were synthesized. They were fully protected (acetyl at the N terminus and ester or amide at the C terminus), making cysteine thiolate and histidine imidazole the only donor functions. The central amino acids (valine, proline, and the nonnatural amino acid (S)-3-amino-2-oxo-1N-pyrrolidineacetic acid, Apa) were chosen such that they support or strongly favor a folding of the peptide chain in this position. Potentiometric measurements showed that all these peptides form 1:1 Zn complexes in solution and that the bis-cysteinyll peptides also form 2:2 complexes. In these complexes the peptide is a chelating ligand forming 12- to 17-membered chelate rings. A comparative discussion of complex stabilities reveals that the peptides containing valine in the central position do not provide addnl. stability to their Zn complexes by protein folding, e.g. by a  $\beta$ -turn. Proline, and more pronouncedly the nonnatural amino acid Apa, however, exert this type of complex stability enhancement by preorganization.

IT 4371-56-6 24948-52-5 206430-44-6

206430-66-2

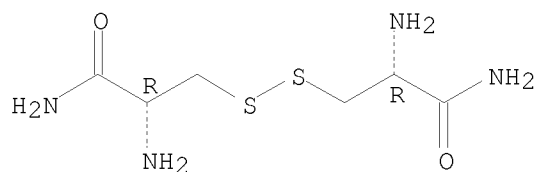
RL: RCT (Reactant); RACT (Reactant or reagent)

(for preparation of peptides and their zinc complexes)

RN 4371-56-6 CAPLUS

CN Propanamide, 3,3'-dithiobis[2-amino-, (2R,2'R)- (9CI) (CA INDEX NAME)

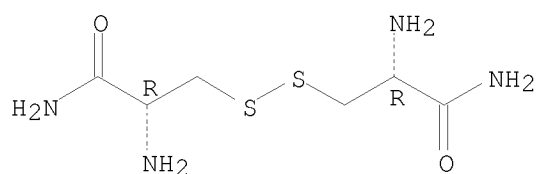
Absolute stereochemistry.



RN 24948-52-5 CAPLUS

CN Propanamide, 3,3'-dithiobis[2-amino-, dihydrobromide, [R-(R\*,R\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

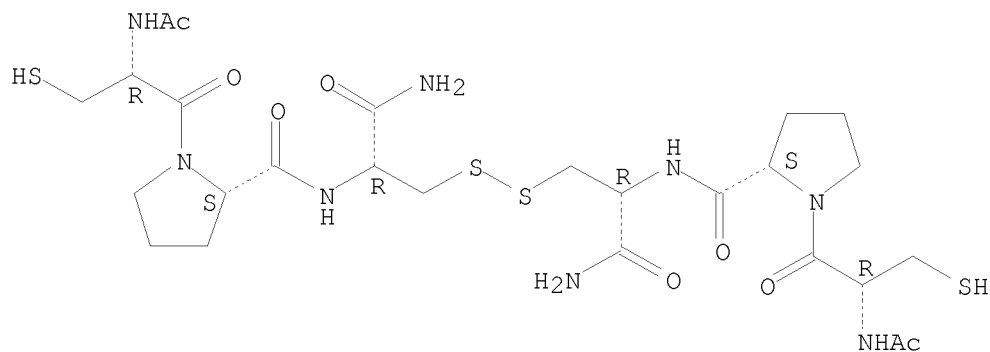


● 2 HBr

RN 206430-44-6 CAPLUS

CN L-Cysteinamide, N-acetyl-L-cysteiny-L-prolyl-, bimol. (3→3')-disulfide (9CI) (CA INDEX NAME)

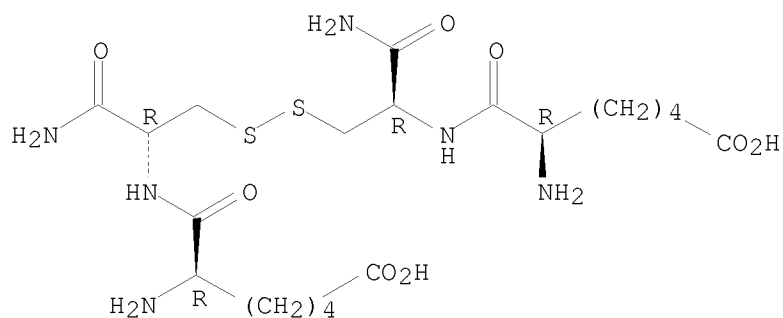
Absolute stereochemistry.



RN 206430-66-2 CAPLUS

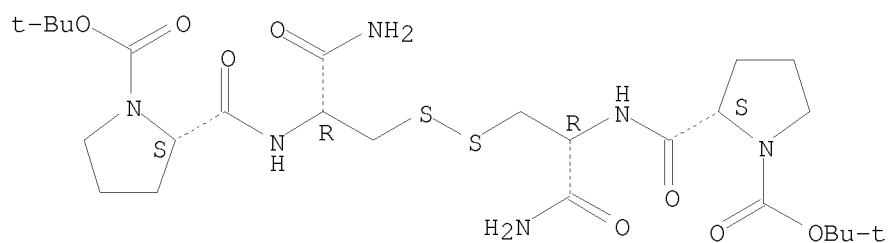
CN L-Cysteinamide, 6-carboxy-D-norleucyl-, bimol. (2→2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 206430-37-7P 206430-40-2P 206430-42-4P  
 206430-65-1P 206430-67-3P 206430-69-5P  
 206430-70-8P 206430-73-1P 206430-74-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (for preparation of peptides and their zinc complexes)  
 RN 206430-37-7 CAPLUS  
 CN L-Cysteinamide, 1-[(1,1-dimethylethoxy)carbonyl]-L-prolyl-, bimol.  
 (2→2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

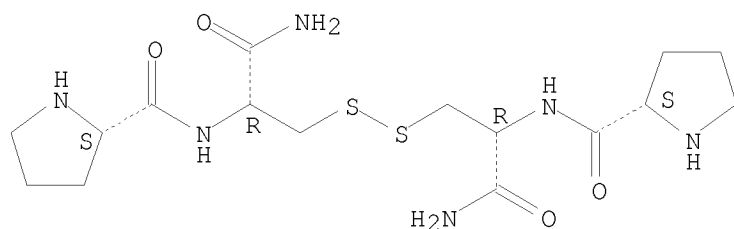


RN 206430-40-2 CAPLUS  
 CN L-Cysteinamide, L-prolyl-, bimol. (2→2')-disulfide,  
 bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

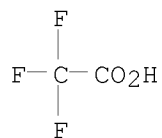
CRN 206430-39-9  
 CMF C16 H28 N6 O4 S2

Absolute stereochemistry.



CM 2

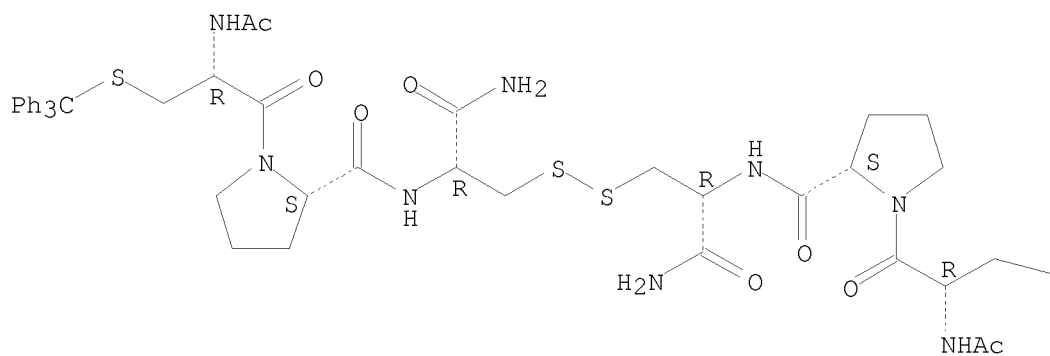
CRN 76-05-1  
 CMF C2 H F3 O2



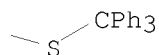
RN 206430-42-4 CAPLUS  
 CN L-Cysteinamide, N-acetyl-S-(triphenylmethyl)-L-cysteinyl-L-prolyl-, bimol.  
 (3→3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



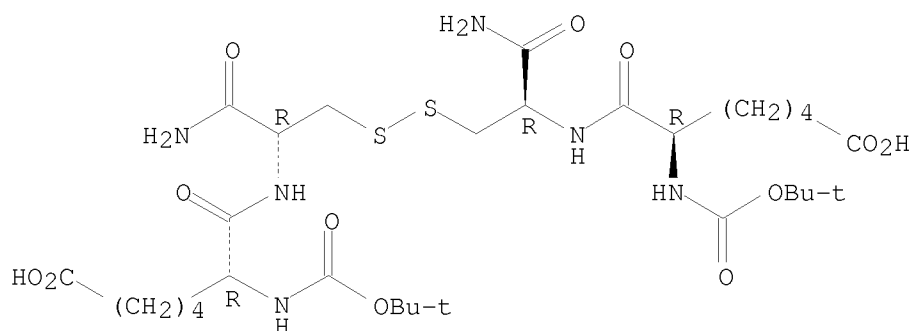
PAGE 1-B



RN 206430-65-1 CAPLUS  
 CN 20-Oxa-11,12-dithia-8,15,18-triazadocosanoic acid, 9,14-bis(aminocarbonyl)-  
 17-(4-carboxybutyl)-6-[[ (1,1-dimethylethoxy)carbonyl]amino]-21,21-dimethyl-  
 7,16,19-trioxo-, (6R,9R,14R,17R)- (CA INDEX NAME)

Absolute stereochemistry.





RN 206430-67-3 CAPLUS

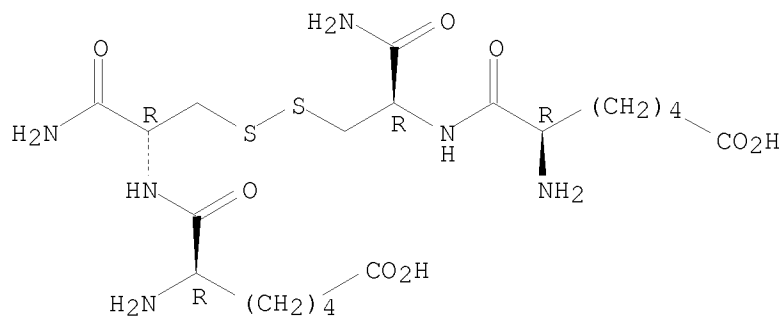
CN L-Cysteinamide, 6-carboxy-D-norleucyl-, bimol. (2→2')-disulfide, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 206430-66-2

CMF C20 H36 N6 O8 S2

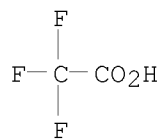
Absolute stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 206430-69-5 CAPLUS

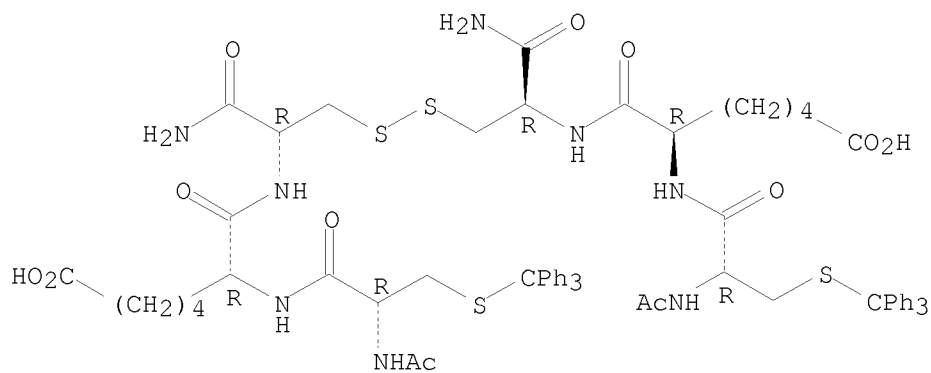
CN L-Cysteinamide, N-acetyl-S-(triphenylmethyl)-L-cysteinyl-6-carboxy-D-norleucyl-, bimol. (3→3')-disulfide, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 206430-68-4

CMF C68 H78 N8 O12 S4

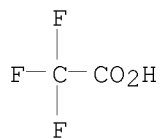
Absolute stereochemistry.



CM 2

CRN 76-05-1

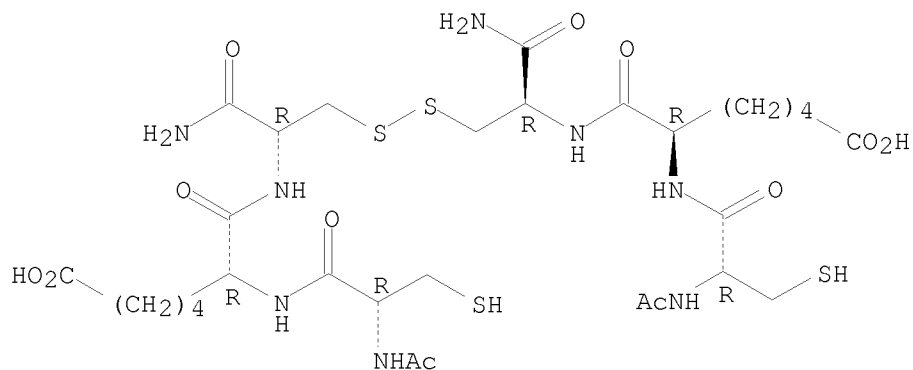
CMF C2 H F3 O2



RN 206430-70-8 CAPLUS

CN L-Cysteinamide, N-acetyl-L-cysteiny-6-carboxy-D-norleucyl-, bimol. (3→3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

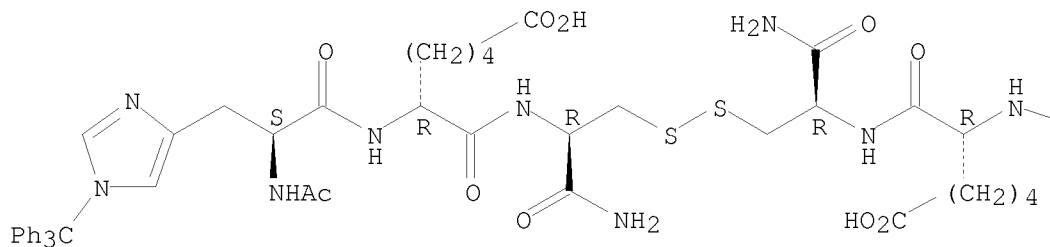


RN 206430-73-1 CAPLUS

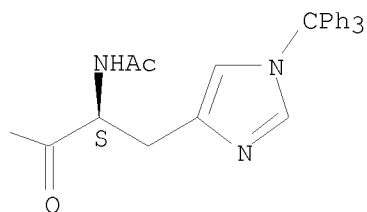
CN L-Cysteinamide, N-acetyl-1-(triphenylmethyl)-L-histidyl-6-carboxy-D-norleucyl-, bimol. (3→3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



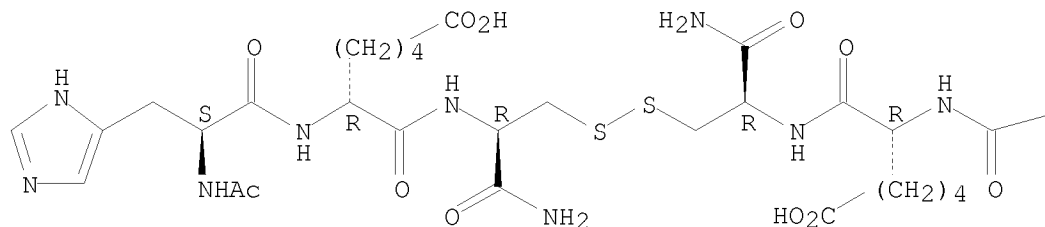
PAGE 1-B



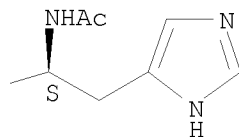
RN 206430-74-2 CAPLUS  
 CN L-Cysteinamide, N-acetyl-L-histidyl-6-carboxy-D-norleucyl-, bimol.  
 (3→3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

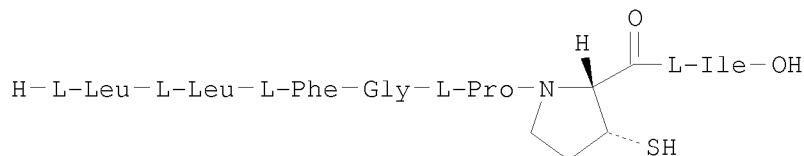
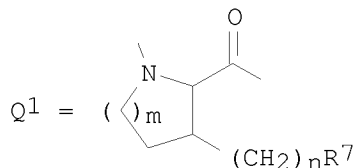
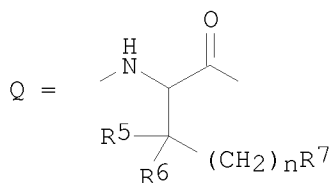


REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 69 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:197524 CAPLUS  
 DOCUMENT NUMBER: 128:257704  
 ORIGINAL REFERENCE NO.: 128:51023a,51028a  
 TITLE: Preparation of methionine, penicillamine and  
 cysteine-analog containing peptides having  
 immunomodulating activity  
 INVENTOR(S): Bergstrand, Hakan; Eriksson, Tomas; Lindvall, Magnus;

PATENT ASSIGNEE(S): Sarnstrand, Bengt  
 Astra Aktiebolag, Swed.; Bergstrand, Hakan; Eriksson,  
 Tomas; Lindvall, Magnus; Sarnstrand, Bengt  
 SOURCE: PCT Int. Appl., 75 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9812219	A1	19980326	WO 1997-SE1554	19970915
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9744063	A	19980414	AU 1997-44063	19970915
ZA 9708472	A	19980323	ZA 1997-8472	19970919
PRIORITY APPLN. INFO.:			SE 1996-3468	A 19960923
			WO 1997-SE1554	W 19970915
OTHER SOURCE(S):		MARPAT 128:257704		
GI				



I

AB Physiol. active peptides A-R1-R2-R3-(R4)x-B [A = H, protective group,  
 amino acid residue; R1 = Gly, Pro, Asp, Arg, Ala, Ile, Trp, Ser, Cys, Glu,  
 Asn, R8; R2 = Cys, Pro, Ile, Ala, Tyr, Thr, Arg, pipecolic acid, R8; R3 =  
 Cys, R8; R4 = Gly, Phe, Val, Ile, Lys, Pro, Trp, Tyr, Glu, Leu, Met; R5,  
 R6 = independently H, alkyl, alkoxy, aryl; R7 = SOH, SO2H, SO3H, SR9,  
 SeR9, TeR9; R8 = residue Q, Q1; R9 = H, alkyl, alkoxy, aryl, SR10, SOR10,  
 SO2R10; R10 = H, alkyl, alkoxy; B = OH, NH2, protected O, protected N,  
 amino acid residue; n = 0-4; m = 0-4; x = 0-1; with provisos; the entire  
 peptide contains 3-30 amino acid residues] and salts and homo- and  
 heterodimers thereof are described as compds. for use in therapy as  
 immunomodulatory agents. These peptides are absorbable by the epithelial  
 cell lining in a mammal resulting in a modulated immune response and  
 thereby a therapeutic effect against disease. Thus, a variety of cysteine  
 analog peptides, e.g. I, were prepared by solid-phase methods and tested for  
 immunomodulatory activity in a delayed type hypersensitivity test in mice.

IT 205260-64-6P 205260-65-7P 205260-66-8P

205260-79-3P 205263-49-6P 205263-77-0P

205263-81-6P 205263-85-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

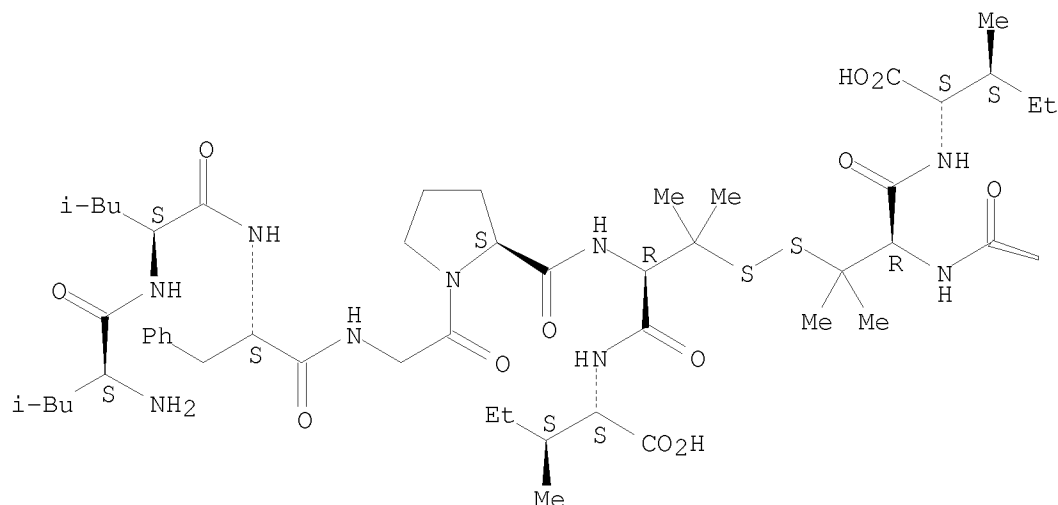
(preparation of cysteine analog peptides having immunomodulatory effects)

RN 205260-64-6 CAPLUS

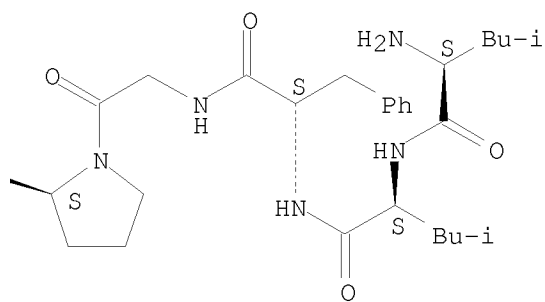
CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-3-mercapto-L-valyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

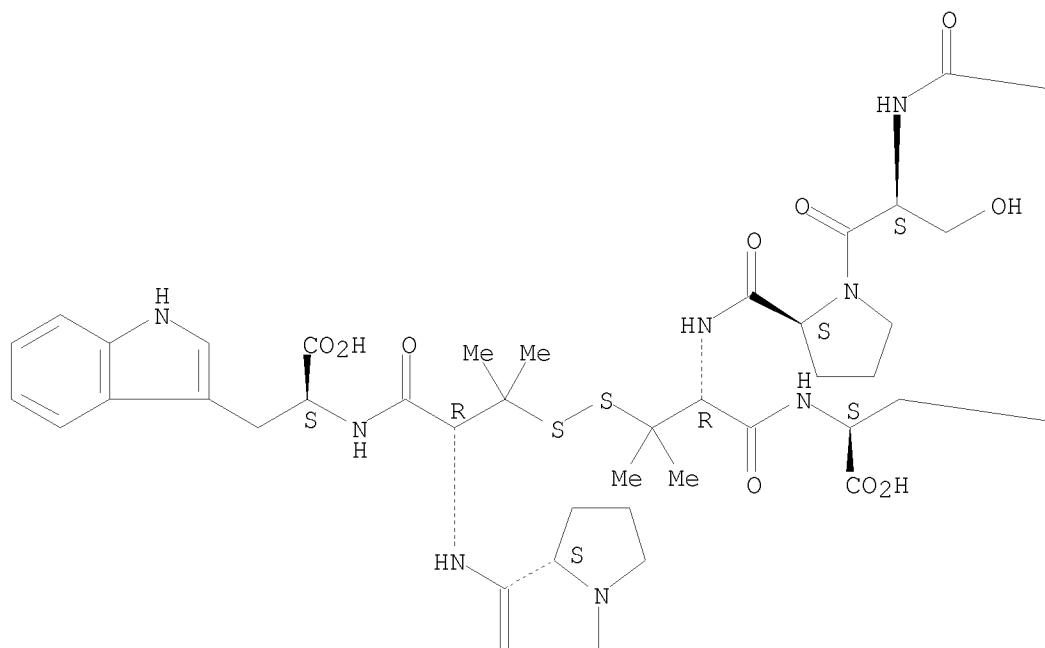


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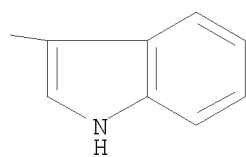
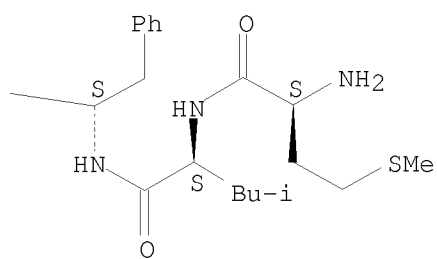
CN L-Tryptophan, L-methionyl-L-leucyl-L-phenylalanyl-L-seryl-L-prolyl-3-mercapto-L-valyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

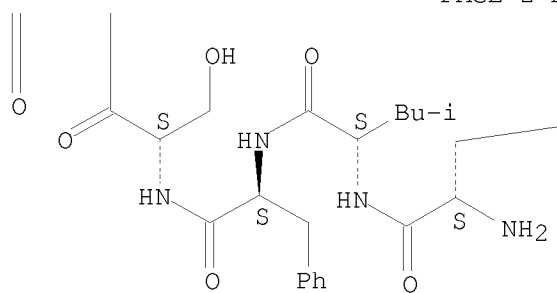
PAGE 1-A

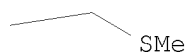


PAGE 1-B



PAGE 2-A

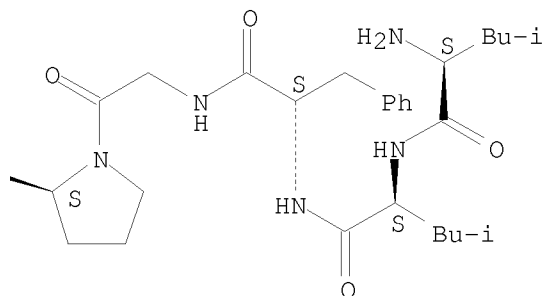
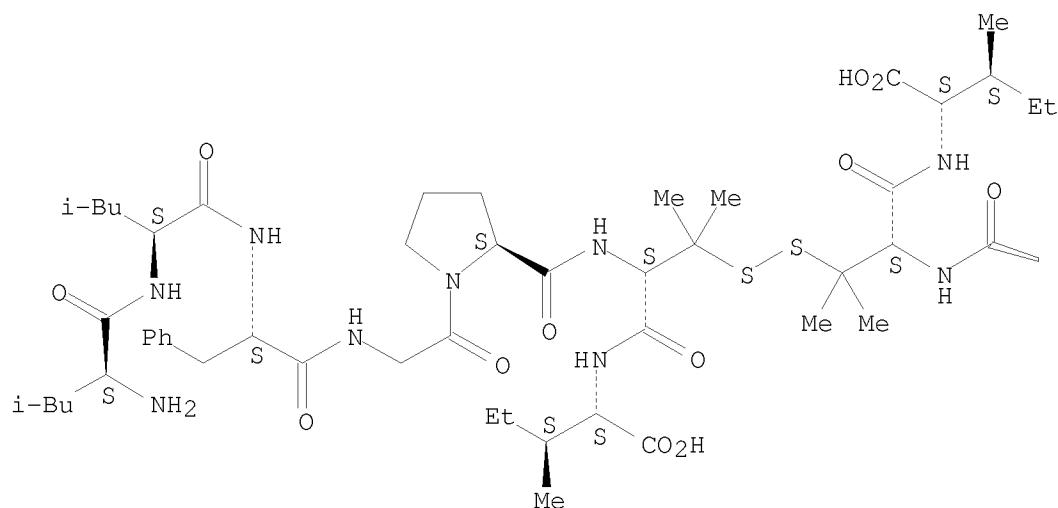




RN 205260-66-8 CAPLUS

CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-3-mercapto-D-valyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

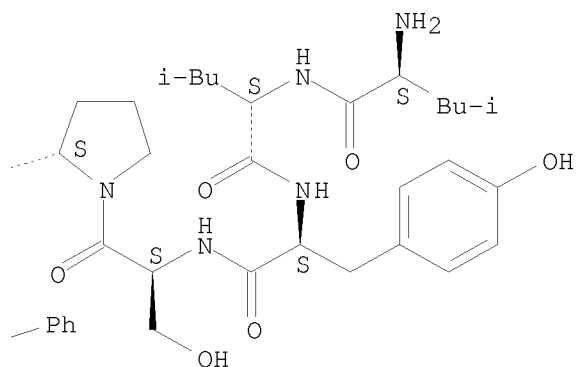
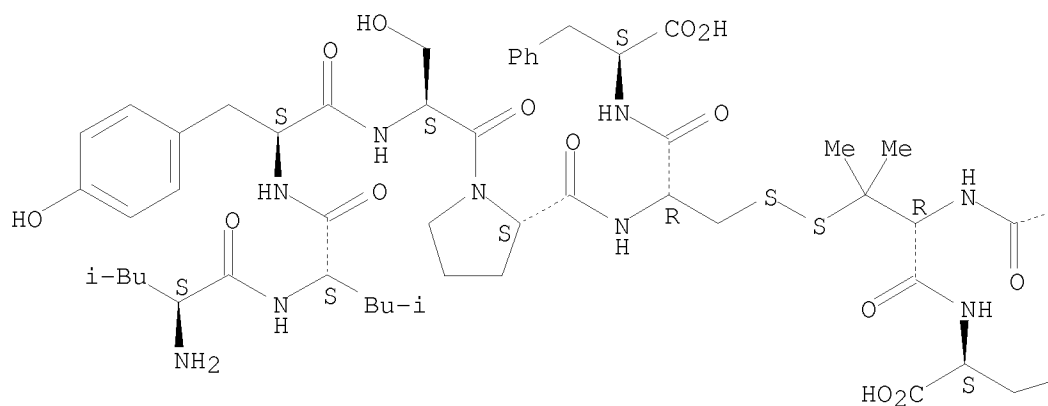
Absolute stereochemistry.



RN 205260-79-3 CAPLUS

CN L-Phenylalanine, L-leucyl-L-leucyl-L-tyrosyl-L-seryl-L-prolyl-L-cysteinyll-, (6→6')-disulfide with L-leucyl-L-leucyl-L-tyrosyl-L-seryl-L-prolyl-3-mercapto-L-valyl-L-phenylalanine (9CI) (CA INDEX NAME)

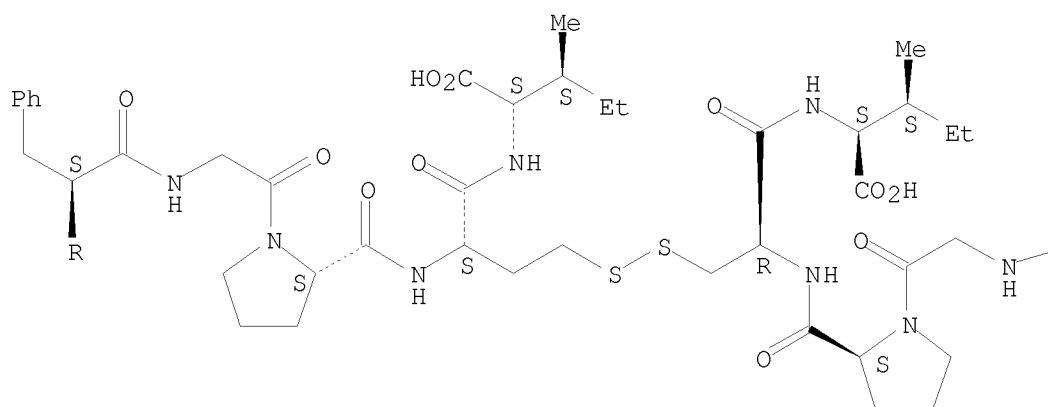
Absolute stereochemistry.



RN 205263-49-6 CAPLUS

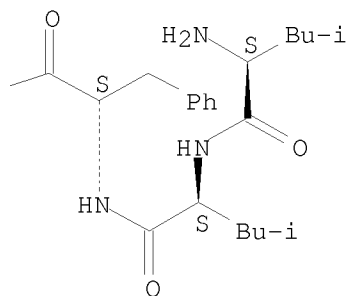
CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-L-cysteinyl-, (6→6')-disulfide with L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-L-homocysteinyl-L-isoleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

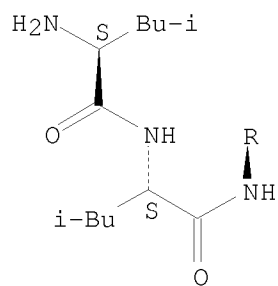




PAGE 1-B



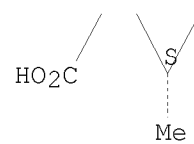
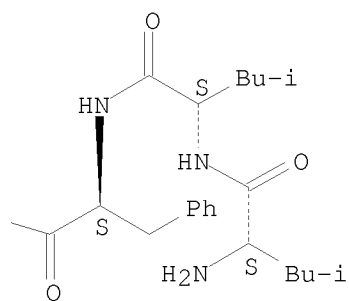
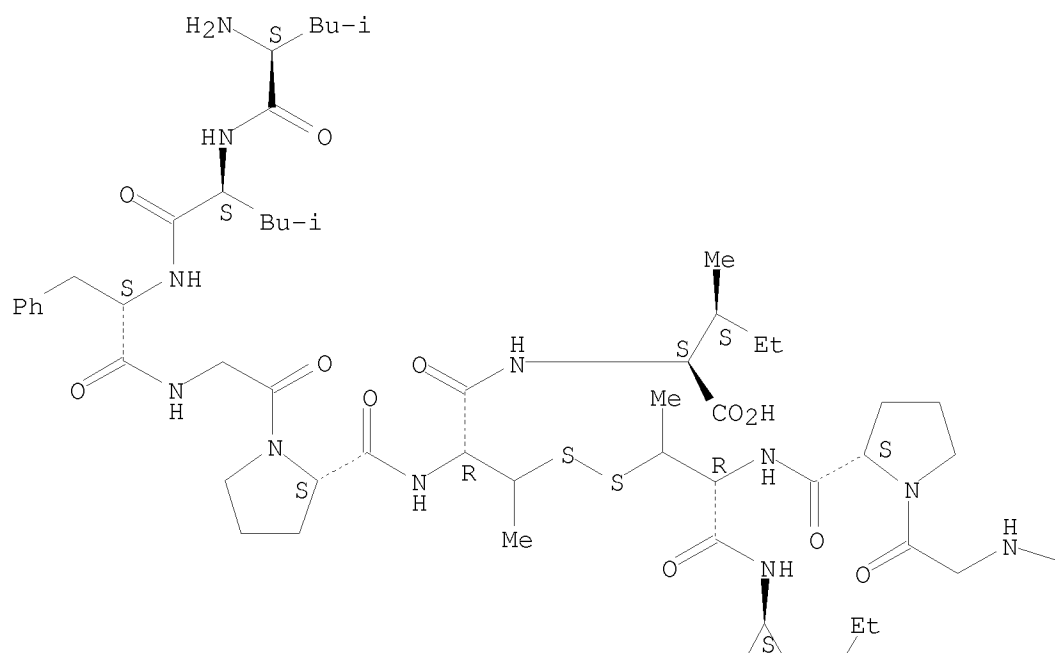
PAGE 2-A



RN 205263-77-0 CAPLUS

CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-(2R)-2-amino-3-mercaptoputanoyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

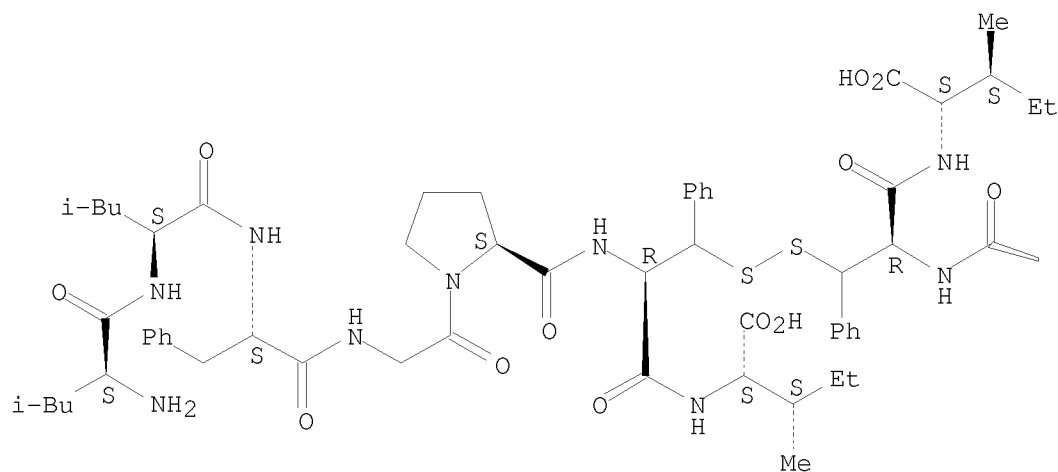
Absolute stereochemistry.



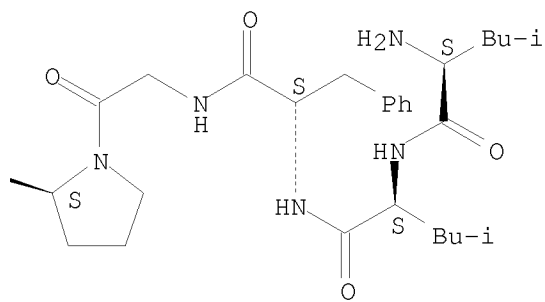
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 mercapto-L-phenylalanyl-, bimol. (6 $\rightarrow$ 6')-disulfide (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.

PAGE 1-A

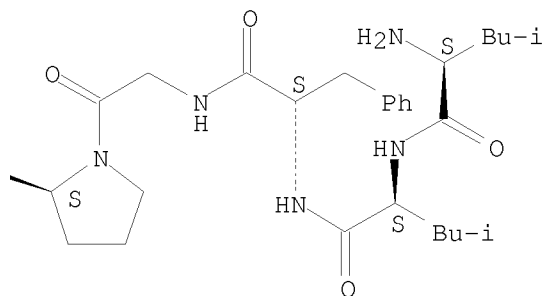
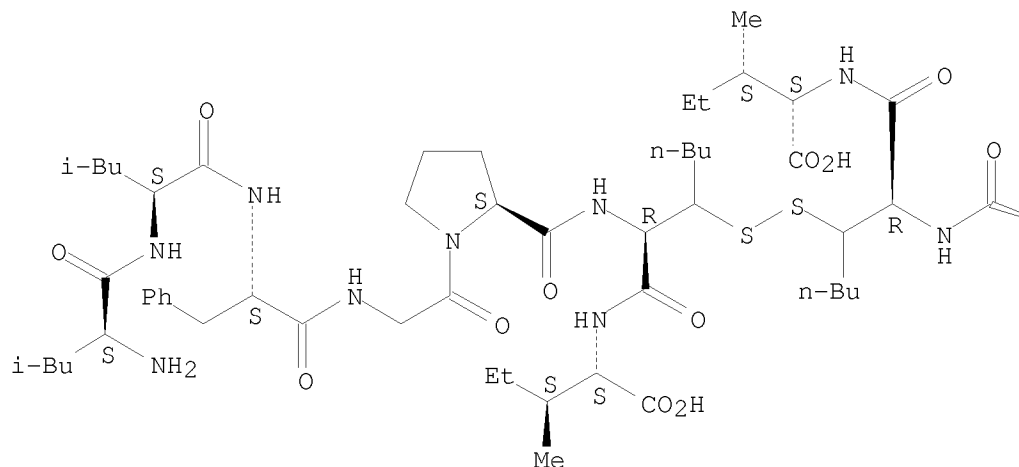


PAGE 1-B



RN 205263-85-0 CAPLUS  
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 3-mercaptoheptanoyl-, bimol. (6 $\rightarrow$ 6')-disulfide (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 70 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:197522 CAPLUS  
 DOCUMENT NUMBER: 128:257702  
 ORIGINAL REFERENCE NO.: 128:51023a, 51028a  
 TITLE: Preparation of cysteine heterodimer peptides with immunomodulatory activity  
 INVENTOR(S): Bergstrand, Hakan; Eriksson, Tomas; Lindvall, Magnus; Sarnstrand, Bengt  
 PATENT ASSIGNEE(S): Astra Aktiebolag, Swed.; Bergstrand, Hakan; Eriksson, Tomas; Lindvall, Magnus; Sarnstrand, Bengt  
 SOURCE: PCT Int. Appl., 47 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9812217	A1	19980326	WO 1997-SE1551	19970915
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR,				

KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG,  
 US, UZ, VN, YU, ZW  
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,  
 GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,  
 GN, ML, MR, NE, SN, TD, TG

AU 9744060 A 19980414 AU 1997-44060 19970915  
 PRIORITY APPLN. INFO.: SE 1996-3465 A 19960923  
 WO 1997-SE1551 W 19970915  
 OTHER SOURCE(S): MARPAT 128:257702  
 GI

H-L-Leu-L-Leu-L-Phe-Gly-L-Pro-L-Cys-L-Ile-OH  
 H-D-Leu-L-Leu-L-Phe-Gly-L-Pro-L-Cys-L-Ile-OH I

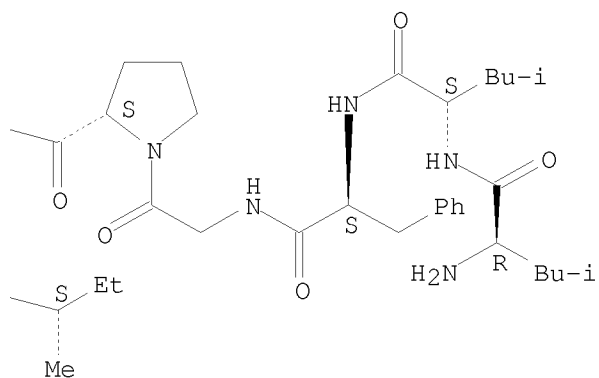
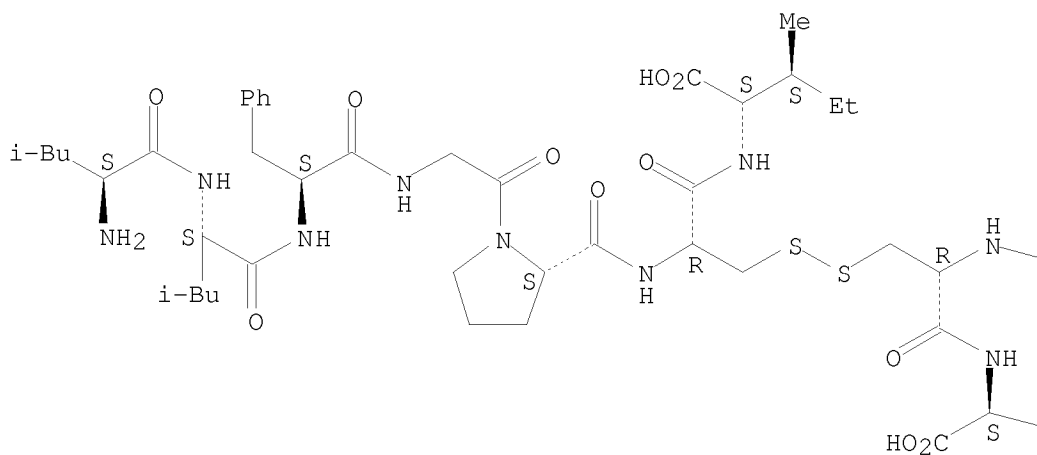
AB Cysteine peptide heterodimers of two non-identical peptide monomers wherein the first monomer is A-R1-R2-Cys-(R3)x-B [A = H, protective group, amino acid residue; R1 = Ser, Gly, Ala, Asp; R2 = Pro, Ile, pipecolic acid; R3 = Phe, Ile, Pro, Ala; B = OH, NH2, protected O, protected N, amino acid residue; x = 0-1; the entire peptide contains 3-30 amino acid residues] and the second monomer is a cysteine-containing peptide different from the first peptide, and salts thereof are described as compds. for use in therapy as immunomodulatory agents. These peptides are absorbable by the epithelial cell lining in a mammal resulting in a modulated immune response and thereby a therapeutic effect against disease. Thus, a variety of usym. cysteine disulfide-containing peptides, e.g. I, were prepared by solid-phase methods and tested for immunomodulatory activity in a delayed type hypersensitivity test in mice.

IT 205253-95-8P 205253-96-9P 205253-97-0P  
 205253-98-1P 205253-99-2P 205254-00-8P  
 205254-01-9P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of cysteine heterodimer peptides with immunomodulatory activity)

RN 205253-95-8 CAPLUS

CN L-Isoleucine, D-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-L-cysteinyll-, (6→6')-disulfide with L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-L-cysteinyll-L-isoleucine (9CI) (CA INDEX NAME)

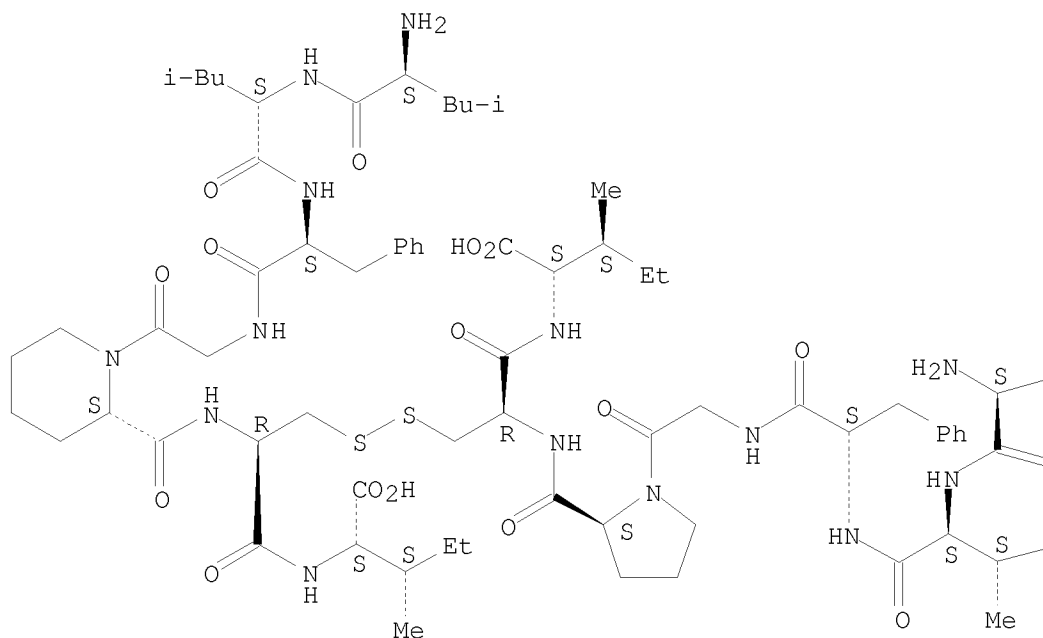
Absolute stereochemistry.



RN 205253-96-9 CAPLUS

CN L-Isoleucine, L-leucyl-L-isoleucyl-L-phenylalanylglycyl-L-prolyl-L-cysteinyl-, (6→6')-disulfide with L-leucyl-L-leucyl-L-phenylalanylglycyl-(2S)-2-piperidinecarbonyl-L-cysteinyl-L-isoleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



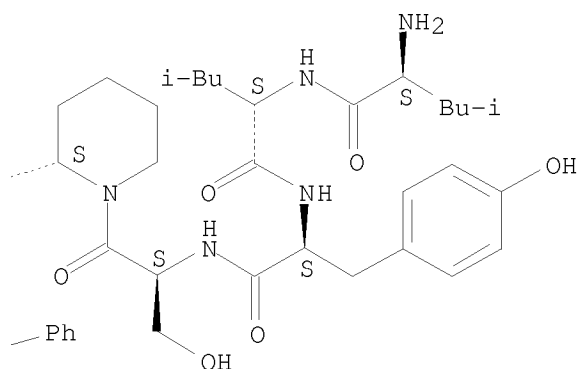
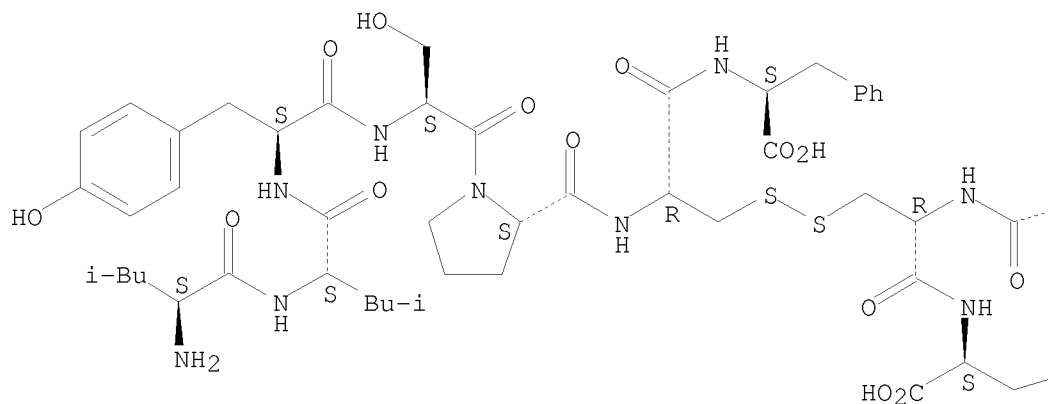
— Bu-i

$$\text{C} \equiv \text{O}$$

Et

RN	205253-97-0	CAPLUS
CN	L-Phenylalanine, L-leucyl-L-leucyl-L-tyrosyl-L-seryl-(2S)-2-piperidinecarbonyl-L-cysteinyl-, (6→6')-disulfide with L-leucyl-L-leucyl-L-tyrosyl-L-seryl-L-prolyl-L-cysteinyl-L-phenylalanine (9CI) (CA INDEX NAME)	

Absolute stereochemistry.

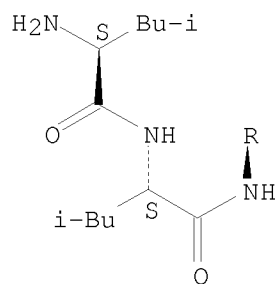
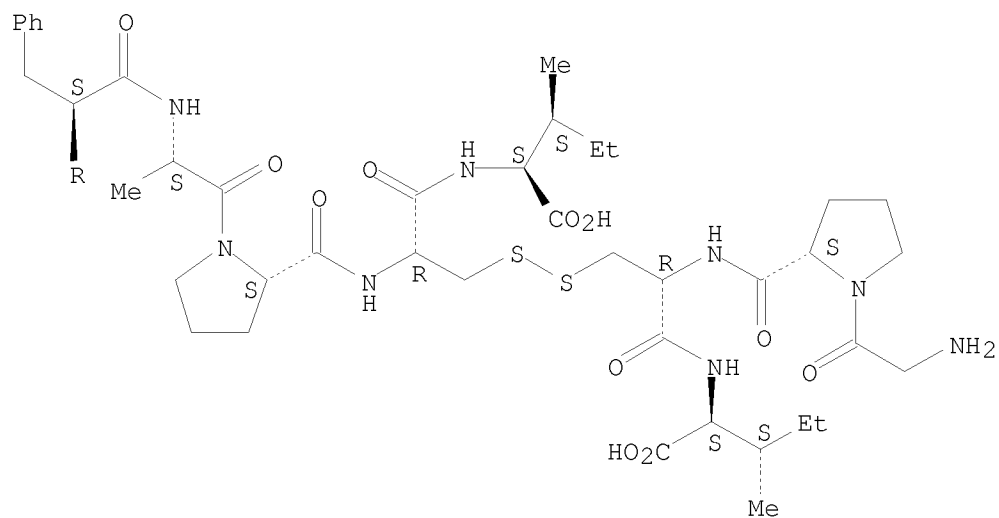


RN 205253-98-1 CAPLUS

CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanyl-L-alanyl-L-prolyl-L-cysteinyl-, (6→3')-disulfide with glycyl-L-prolyl-L-cysteinyl-L-isoleucine (9CI) (CA INDEX NAME)

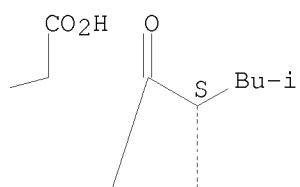
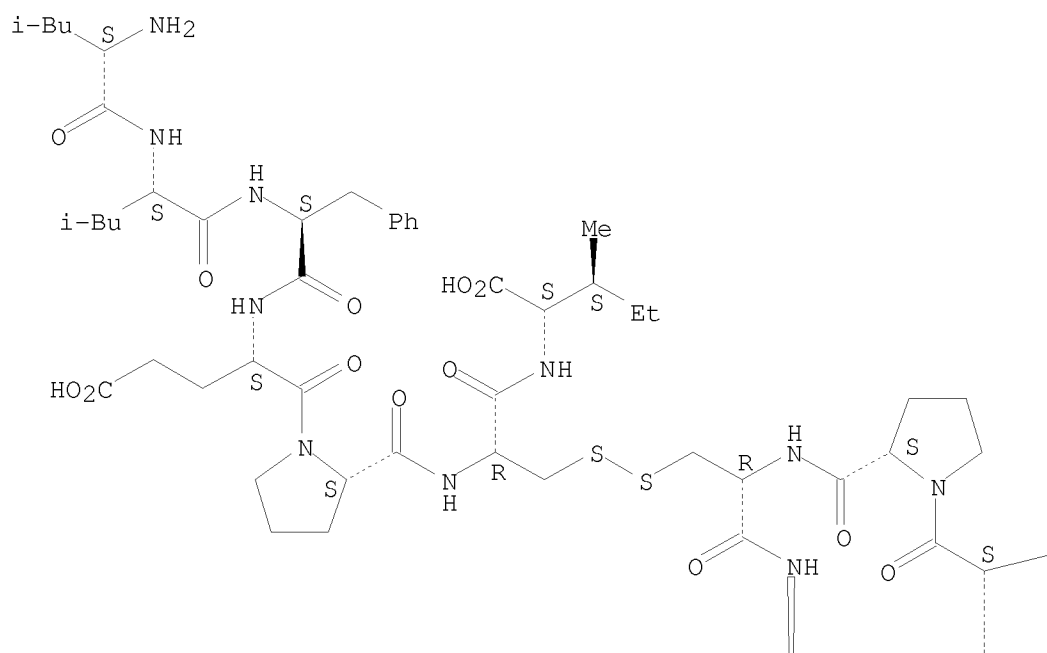
Absolute stereochemistry.

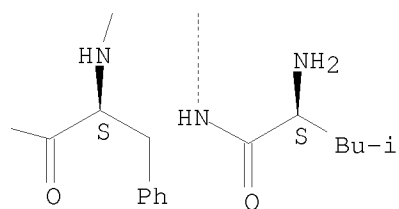
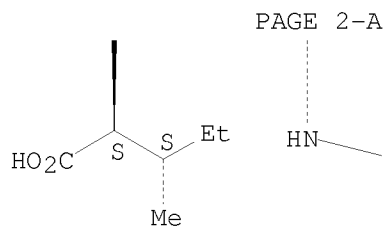




RN 205253-99-2 CAPLUS  
 CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanyl-L- $\alpha$ -aspartyl-L-prolyl-L-cysteinyl-, (6 $\rightarrow$ 6')-disulfide with L-leucyl-L-leucyl-L-phenylalanyl-L- $\alpha$ -glutamyl-L-prolyl-L-cysteinyl-L-isoleucine (9CI)  
 (CA INDEX NAME)

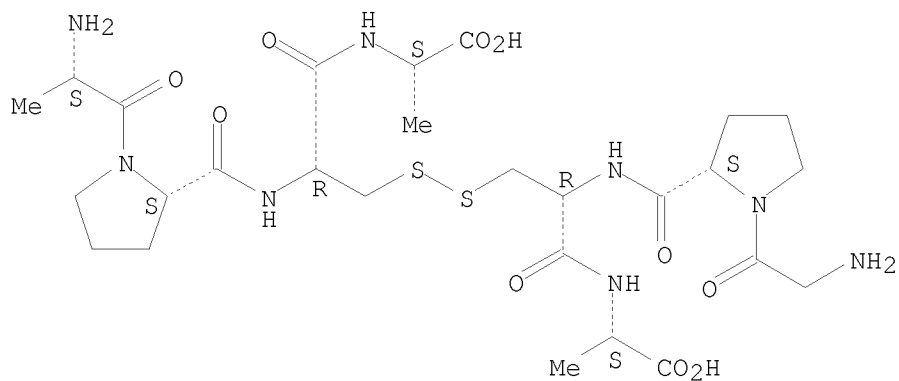
Absolute stereochemistry.





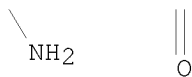
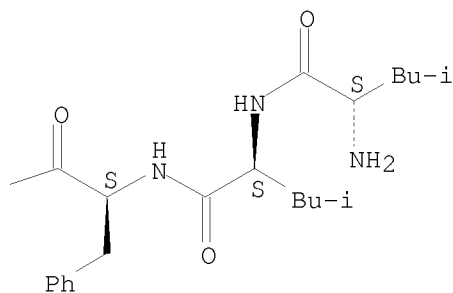
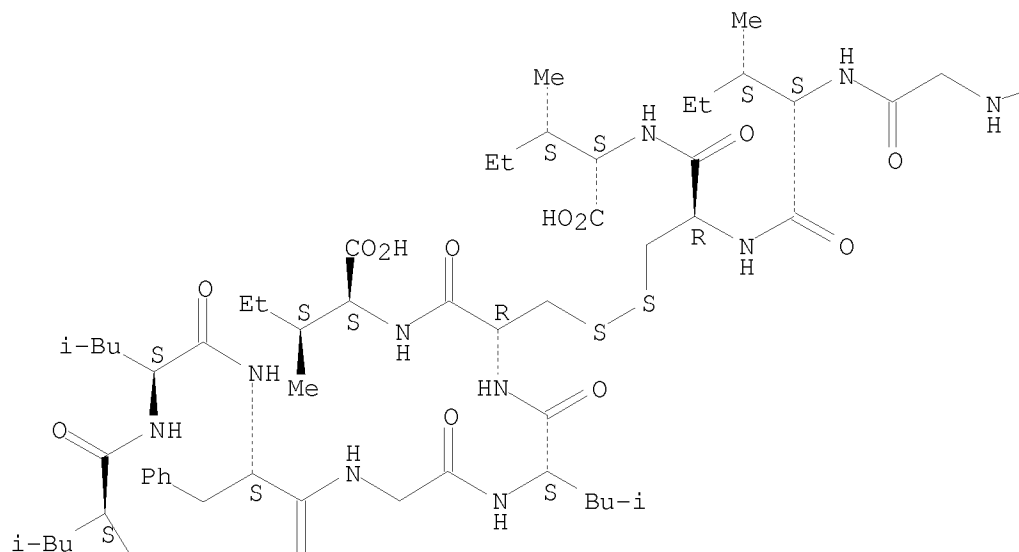
RN 205254-00-8 CAPLUS  
 CN L-Alanine, L-alanyl-L-prolyl-L-cysteiny-, (3→3')-disulfide with  
 glycyl-L-prolyl-L-cysteiny-L-alanine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 205254-01-9 CAPLUS  
 CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-isoleucyl-L-  
 cysteiny-, (6→6')-disulfide with L-leucyl-L-leucyl-L-  
 phenylalanylglycyl-L-leucyl-L-cysteiny-L-isoleucine (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 71 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:197520 CAPLUS  
 DOCUMENT NUMBER: 128:257700  
 ORIGINAL REFERENCE NO.: 128:51023a  
 TITLE: Preparation of penicillamine-containing peptides having immunomodulatory activity  
 INVENTOR(S): Bergstrand, Hakan; Eriksson, Tomas; Lindvall, Magnus; Sarnstrand, Bengt  
 PATENT ASSIGNEE(S): Astra Aktiebolag, Swed.; Bergstrand, Hakan; Eriksson, Tomas; Lindvall, Magnus; Sarnstrand, Bengt

SOURCE: PCT Int. Appl., 71 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9812215	A1	19980326	WO 1997-SE1549	19970915
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9744769	A	19980414	AU 1997-44769	19970915
PRIORITY APPLN. INFO.:			SE 1996-3462	A 19960923
			WO 1997-SE1549	W 19970915

OTHER SOURCE(S): MARPAT 128:257700

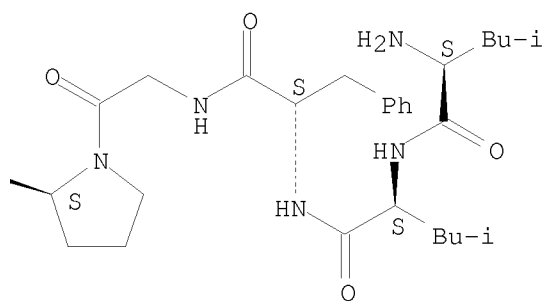
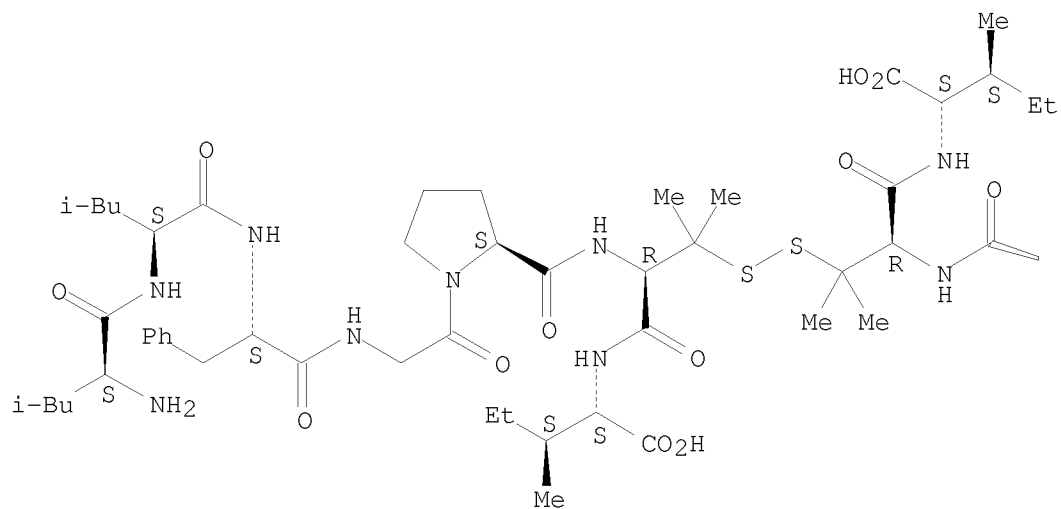
AB Physiol. active peptides A-R1-R2-R3-(R4)x-B [A = H, protective group, amino acid residue; R1 = Gly, Pro, Asp, Arg, Ala, Ile, Trp, Ser, Cys, Glu, penicillamine (Pen), Asn; R2 = Cys, Pro, Ile, Ala, Tyr, Thr, Arg, Pen, pipecolic acid; R3 = Cys, Pen; R4 = Gly, Phe, Val, Ile, Pro, Trp, Tyr, Glu, Lys, Leu, Met; B = OH, NH<sub>2</sub>, protected O, protected N, amino acid residue; x = 0-1; with the provisos that at least one of R1-R3 = Pen and at most one of R1-R3 = Cys; the entire peptide contains 3-30 amino acid residues] and salts and homo- and heterodimers thereof are described as compds. for use in therapy as immunomodulatory agents. These peptides are absorbable by the epithelial cell lining in a mammal resulting in a modulated immune response and thereby a therapeutic effect against disease. Thus, a variety of penicillamine-containing peptides, e.g. H-Leu-Leu-Phe-Gly-Pro-Pen-Ile-OH, were prepared by solid-phase methods and tested for immunomodulatory activity in a delayed type hypersensitivity test in mice.

IT 205260-64-6P 205260-65-7P 205260-66-8P  
 205260-79-3P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of penicillamine-containing peptides having immunomodulatory activity)

RN 205260-64-6 CAPLUS

CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-3-mercapto-L-valyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

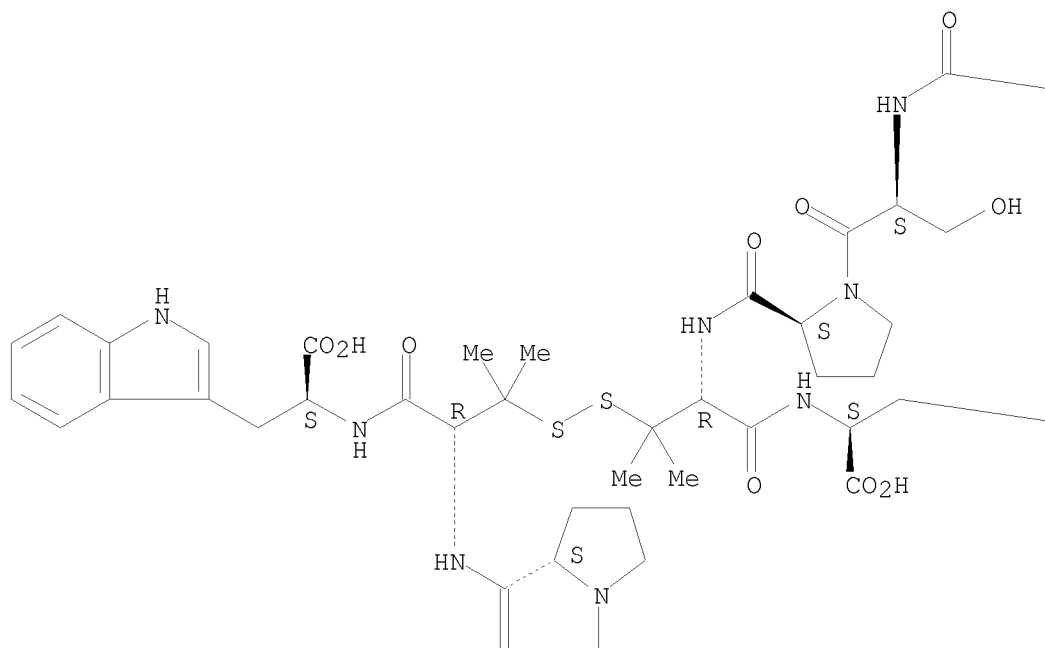


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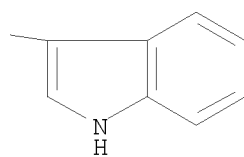
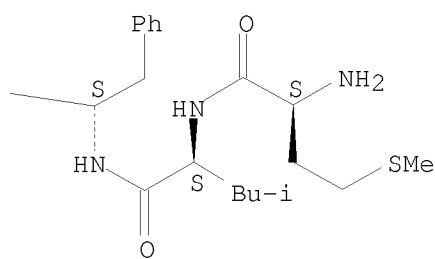
CN L-Tryptophan, L-methionyl-L-leucyl-L-phenylalanyl-L-seryl-L-prolyl-3-mercapto-L-valyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

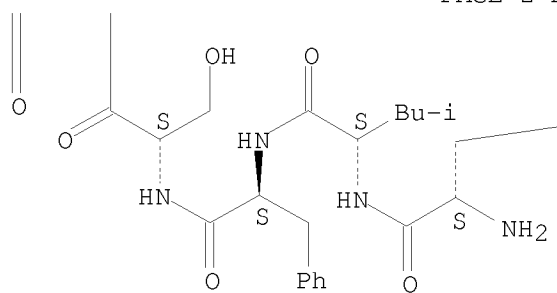
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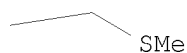


PAGE 1-B



PAGE 2-A

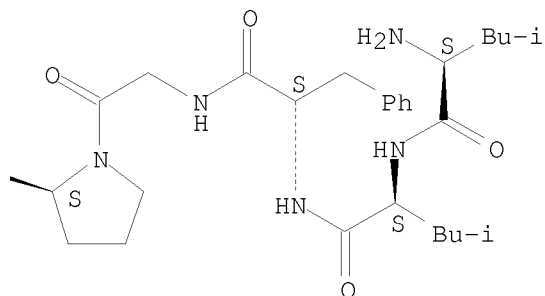
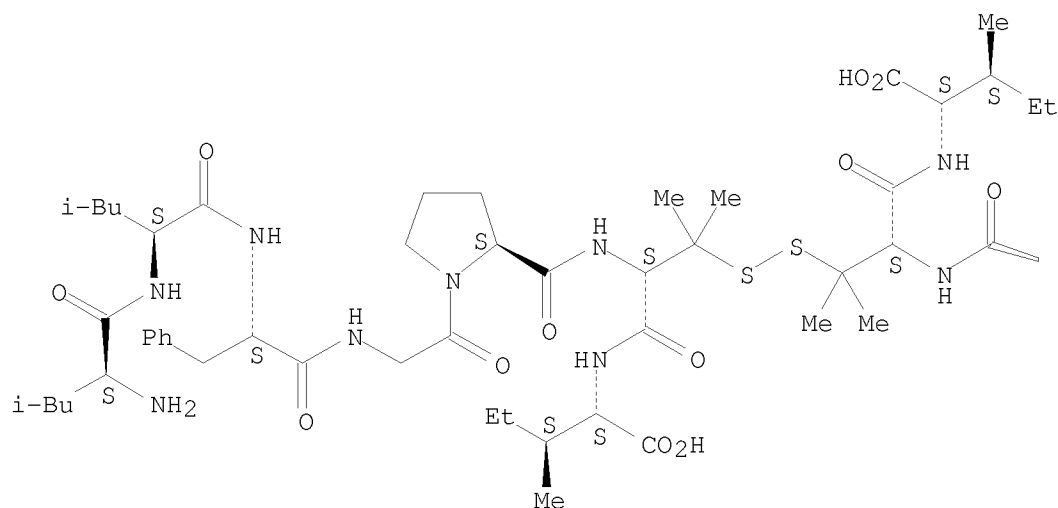




RN 205260-66-8 CAPLUS

CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-3-mercapto-D-valyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

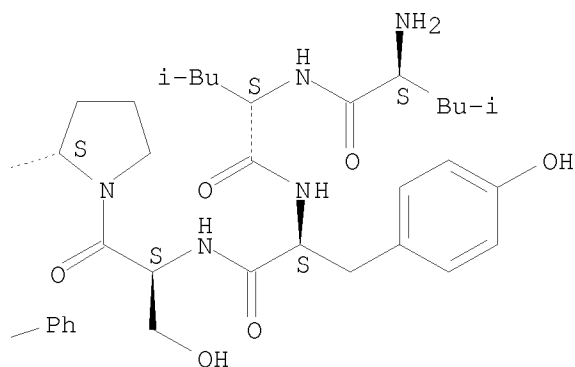
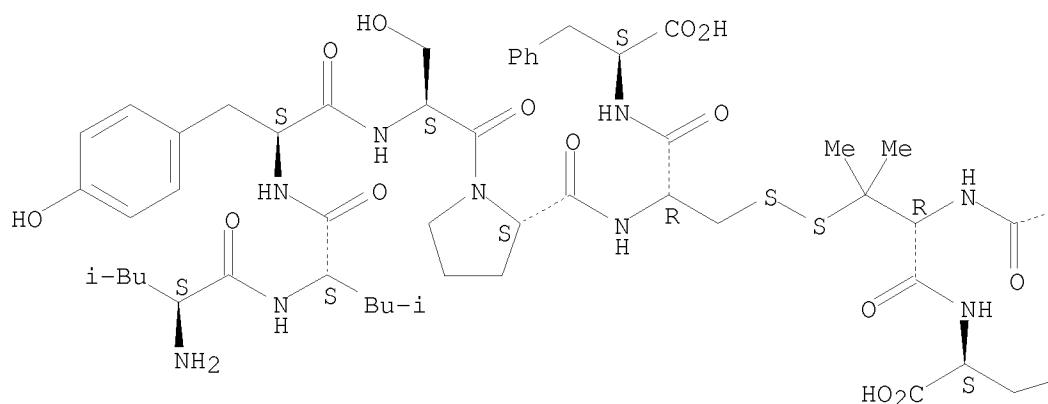


RN 205260-79-3 CAPLUS

CN L-Phenylalanine, L-leucyl-L-leucyl-L-tyrosyl-L-seryl-L-prolyl-L-cysteinyll-, (6→6')-disulfide with L-leucyl-L-leucyl-L-tyrosyl-L-seryl-L-prolyl-3-mercapto-L-valyl-L-phenylalanine (9CI) (CA INDEX NAME)

Absolute stereochemistry.





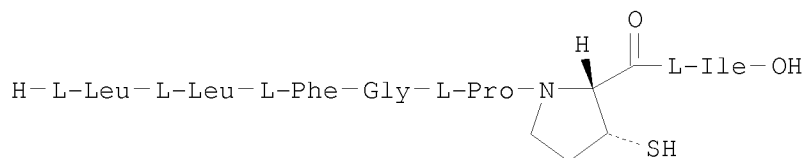
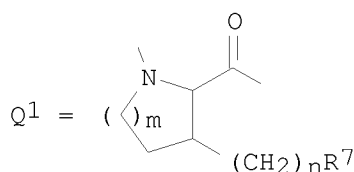
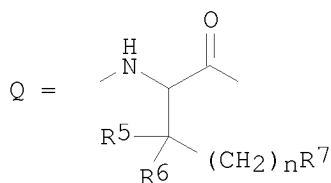
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 72 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:197519 CAPLUS  
 DOCUMENT NUMBER: 128:257699  
 ORIGINAL REFERENCE NO.: 128:51022h, 51023a  
 TITLE: Preparation of cysteine analog peptides having immunomodulatory effects  
 INVENTOR(S): Bergstrand, Hakan; Eriksson, Tomas; Lindvall, Magnus; Sarnstrand, Bengt  
 PATENT ASSIGNEE(S): Astra Aktiebolag, Swed.; Bergstrand, Hakan; Eriksson, Tomas; Lindvall, Magnus; Sarnstrand, Bengt  
 SOURCE: PCT Int. Appl., 81 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9812214	A1	19980326	WO 1997-SE1548	19970915

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW  
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9744059 A 19980414 AU 1997-44059 19970915  
 PRIORITY APPLN. INFO.: SE 1996-3461 A 19960923  
 WO 1997-SE1548 W 19970915  
 OTHER SOURCE(S): MARPAT 128:257699  
 GI



I

AB Physiol. active peptides A-R1-R2-R3-(R4)x-B [A = H, protective group, amino acid residue; R1 = Gly, Pro, Asp, Arg, Ala, Ile, Trp, Ser, Cys, Glu, Asn, R8; R2 = Cys, Pro, Ile, Ala, Tyr, Thr, Arg, pipecolic acid, R8; R3 = Cys, R8; R4 = Gly, Phe, Val, Ile, Pro, Trp, Tyr, Glu, Lys, Leu, Met; R5, R6 = independently H, alkyl, alkoxy, aryl; R7 = SOH, SO2H, SO3H, SR9, SeR9, TeR9; R8 = residue Q, Q1; R9 = H, alkyl, alkoxy, aryl, SR10, SOR10, SO2R10; R10 = H, alkyl, alkoxy; B = OH, NH2, protected O, protected N, amino acid residue; n = 0-4; m = 0-4; x = 0-1; with the provisos that at least one of R1-R3 = R8 and at most one of R1-R3 = Cys; the entire peptide contains 3-30 amino acid residues] and salts and homo- and heterodimers thereof are described as compds. for use in therapy as immunomodulatory agents. These peptides are absorbable by the epithelial cell lining in a mammal resulting in a modulated immune response and thereby a therapeutic effect against disease. Thus, a variety of cysteine analog peptides, e.g. I, were prepared by solid-phase methods and tested for immunomodulatory activity in a delayed type hypersensitivity test in mice.

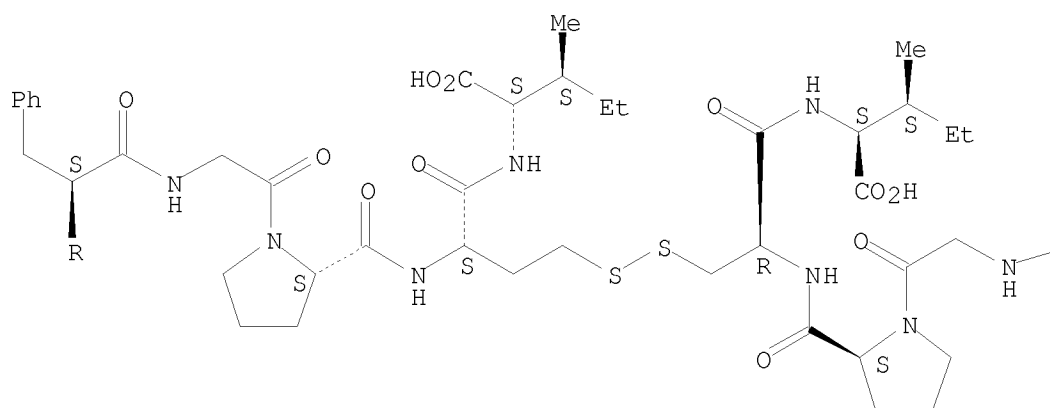
IT 205263-49-6P 205263-77-0P 205263-81-6P  
 205263-85-0P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of cysteine analog peptides having immunomodulatory effects)

RN 205263-49-6 CAPLUS

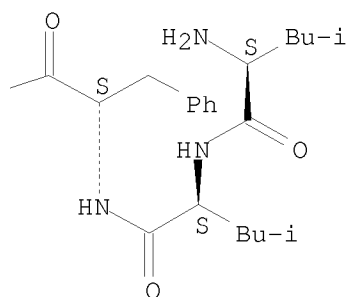
CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-L-cysteinyll-, (6→6')-disulfide with L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-L-homocysteinyll-L-isoleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

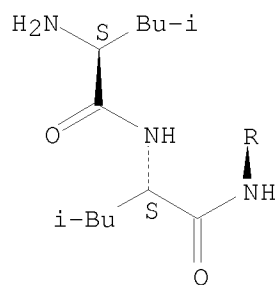
PAGE 1-A



PAGE 1-B

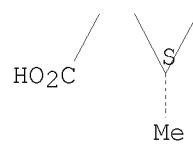
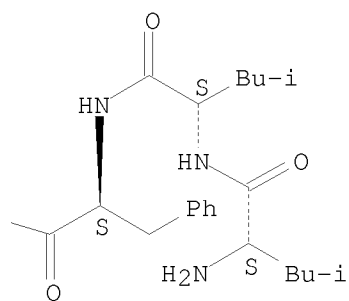
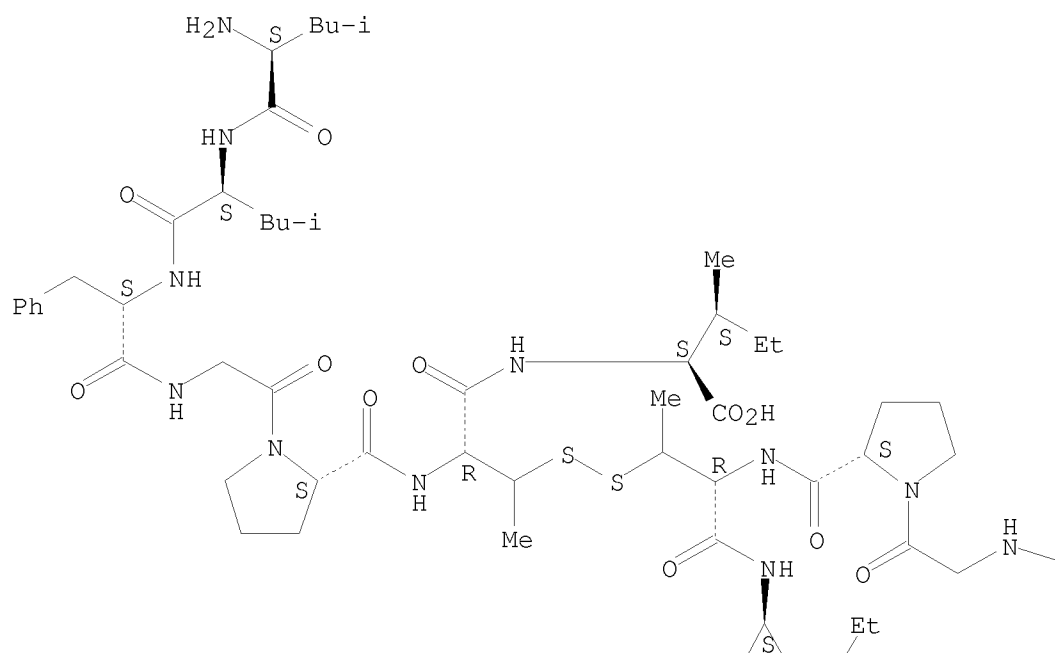


PAGE 2-A



RN 205263-77-0 CAPLUS  
 CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-(2R)-2-amino-3-mercaptopropanoyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

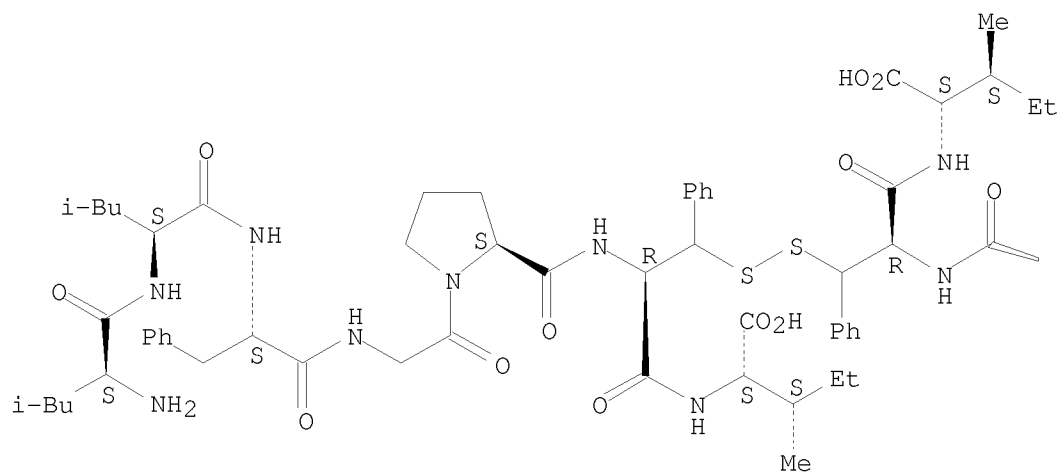
Absolute stereochemistry.



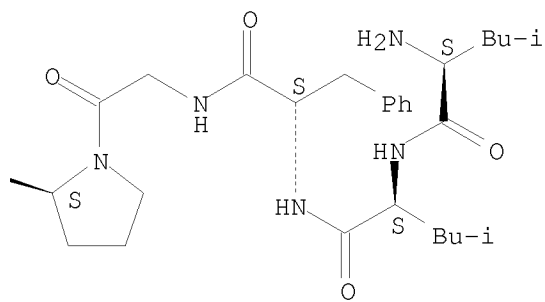
RN 205263-81-6 CAPLUS  
 CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl- $\beta$ -  
 mercapto-L-phenylalanyl-, bimol. (6 $\rightarrow$ 6')-disulfide (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.

PAGE 1-A

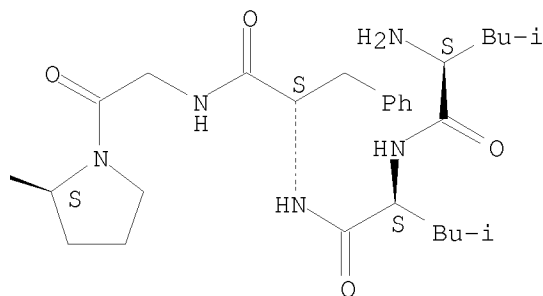
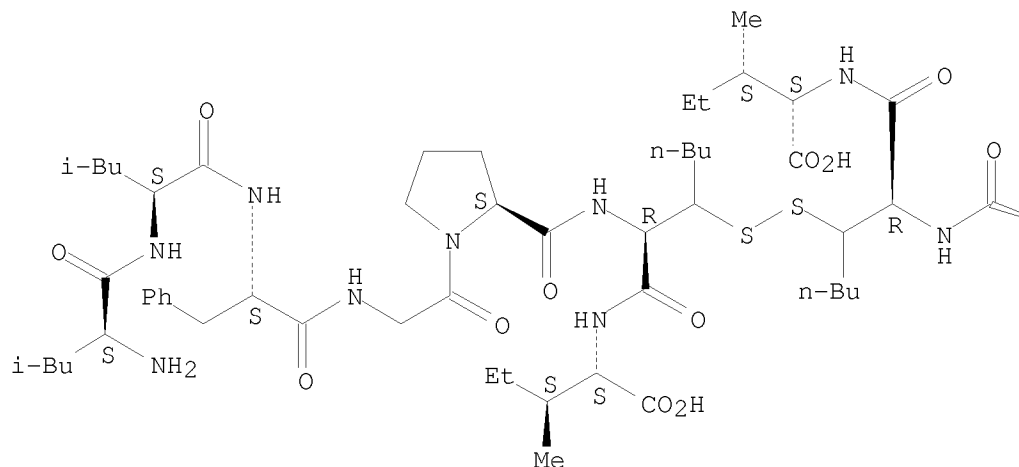


PAGE 1-B



RN 205263-85-0 CAPLUS  
 CN L-Isoleucine, L-leucyl-L-leucyl-L-phenylalanylglycyl-L-prolyl-(2R)-2-amino-  
 3-mercaptoheptanoyl-, bimol. (6 $\rightarrow$ 6')-disulfide (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 73 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:175925 CAPLUS  
 DOCUMENT NUMBER: 128:243875  
 ORIGINAL REFERENCE NO.: 128:48285a,48288a  
 TITLE: Preparation of antitumor DC-89 derivatives  
 INVENTOR(S): Amishiro, Nobuyoshi; Saito, Hiromitsu; Okamoto, Akihiko; Okabe, Masami  
 PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 100 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9809966	A1	19980312	WO 1997-JP3089	19970903
W: AU, BG, BR, CA, CN, CZ, HU, JP, KR, MX, NO, NZ, PL, RO, SG, SI, SK, UA, US, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9741345	A	19980326	AU 1997-41345	19970903

PRIORITY APPLN. INFO.:

JP 1996-232723

A 19960903

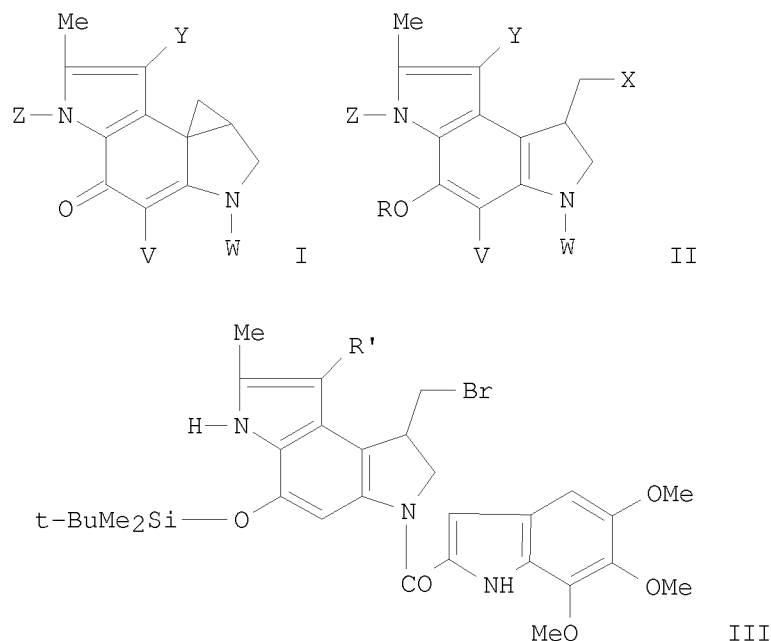
WO 1997-JP3089

W 19970903

OTHER SOURCE(S):

MARPAT 128:243875

GI



AB DC-89 derivs. I and II [Y = H, halo, (un)substituted alkyl, COR1, OR2, SR3, etc.; R1 = H, (un)substituted alkyl, (un)substituted aralkyl, etc.; R2 = H, (un)substituted alkyl, (un)substituted alkenyl, (un)substituted aryl, etc.; R3 = H, (un)substituted alkyl, (un)substituted alkenyl, (un)substituted aryl, (un)substituted heterocyclyl; W = H, acyl such as substituted acryloyl, etc.; Z = H, (un)substituted alkyl, (un)substituted alkenyl, (un)substituted aryl, COR9, etc.; R9 = H, acyl, silyl; V = H, halo, NO2, etc.; X = Cl, Br; R = H, OH, alkoxy, aryl, etc.] and their pharmaceutically acceptable salts are prepared E.g., the title compound III [R' = Me] was prepared in 56% yield by reduction of III [R' = COOMe] with DIBAL-H in THF. In an in vitro study, II [Y = CH2NMe2, R = V = Z = H, X = Cl, W = 5,6,7-trimethoxy-1H-indol-2-ylcarbonyl] HCl (also prepared) had an IC50 of 0.28 nM against HeLaS3 tumor cells.

IT 205051-05-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of antitumor DC-89 derivs.)

RN 205051-05-4 CAPLUS

CN L-Alanine, 3-[[2-[[[(8S)-8-(bromomethyl)-4-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-3,6,7,8-tetrahydro-2-methyl-6-[(5,6,7-trimethoxy-1H-indol-2-yl)carbonyl]benzo[1,2-b:4,3-b']dipyrrol-1-yl]carbonyl]amino]ethyl]dithio]-, ethyl ester (9CI) (CA INDEX NAME)

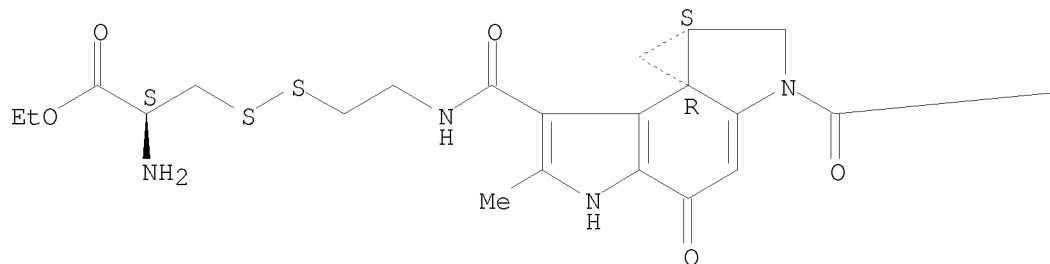
Absolute stereochemistry.

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of antitumor DC-89 derivs.)

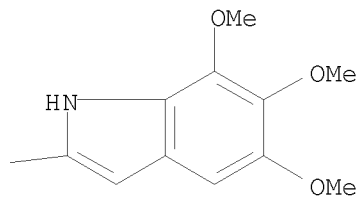
RN 205051-06-5 CAPLUS

CN D-Alanine, 3-[[2-[[[(7bR,8aS)-1,2,4,5,8,8a-hexahydro-6-methyl-4-oxo-2-  
[(5,6,7-trimethoxy-1H-indol-2-yl)carbonyl]cyclopropa[c]pyrrolo[3,2-e]indol-  
7-yl]carbonyl]amino]ethyl]dithio]-, ethyl ester (CA INDEX NAME)

Absolute stereochemistry.



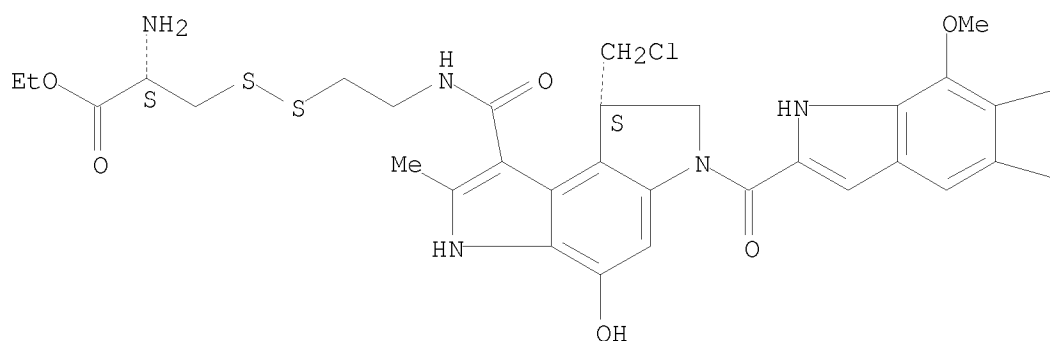




RN 205051-07-6 CAPLUS

CN L-Alanine, 3-[[2-[[[(8S)-8-(chloromethyl)-3,6,7,8-tetrahydro-4-hydroxy-2-methyl-6-[(5,6,7-trimethoxy-1H-indol-2-yl)carbonyl]benzo[1,2-b:4,3-b']dipyrrol-1-yl]carbonyl]amino]ethyl]dithio]-, ethyl ester, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

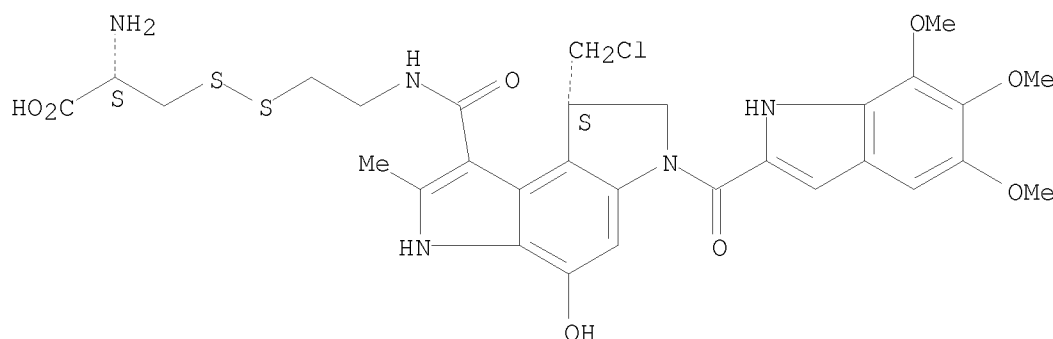
— OMe

— OMe

RN 205051-08-7 CAPLUS

CN L-Alanine, 3-[[2-[[[(8S)-8-(chloromethyl)-3,6,7,8-tetrahydro-4-hydroxy-2-methyl-6-[(5,6,7-trimethoxy-1H-indol-2-yl)carbonyl]benzo[1,2-b:4,3-b']dipyrrol-1-yl]carbonyl]amino]ethyl]dithio]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 74 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:175110 CAPLUS

DOCUMENT NUMBER: 128:269394

ORIGINAL REFERENCE NO.: 128:53322h,53323a

TITLE: Immunomodulatory activity of oligopeptides related to interleukin 1 receptor antagonist sequence

AUTHOR(S): Kluczyk, Alicja; Siemion, Ignacy Z.; Slon-Usakiewicz, Jacek J.; Wieczorek, Zbigniew

CORPORATE SOURCE: Faculty of Chemistry, University of Wroclaw, Wroclaw, 50-383, Pol.

SOURCE: Archivum Immunologiae et Therapiae Experimentalis (1997), 45(5-6), 427-433

CODEN: AITEAT; ISSN: 0004-069X

PUBLISHER: Ossolineum Publishing House

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We examined the immunomodulatory properties of peptides from interleukin 1 receptor antagonist (IL-1Ra) with regard to the humoral (plaqueforming cells - PFC) and cellular (delayed type hypersensitivity - DTH) immune response and GvH reaction. It was found that peptide RKSSK (II) from the N-terminal part of IL-1Ra, although inactive with regard to the inhibition of IL-1 - IL-1 receptor interaction, reduces immune response in a manner similar to cyclosporin A (DTH, PFC in vivo). Peptide GRKSSK (III) was even more potent, whereas peptides from resp. fragment of mouse IL-1Ra were weaker immunosuppressants than II. Peptide VTKFYF (VII) from the C-terminal part of IL-1Ra, very active as IL-1 inhibitor, and its analog VIII with Asp residue, characteristic for IL-1, instead of Lys from IL-1Ra, showed only limited activity despite the previously observed competition with IL-1 for the cellular receptor. Thus, no correlation between the inhibitory and immunomodulatory properties of peptides derived from IL-1Ra was observed

IT 205517-55-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(immunomodulatory activity of oligopeptides related to interleukin 1 receptor antagonist sequence)

RN 205517-55-1 CAPLUS

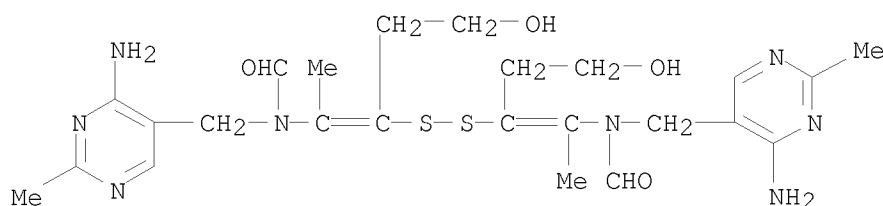
CN L-Lysine, L-lysyl-L-arginyl-L-prolyl-L-cysteinyl-, bimol. (4→4')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

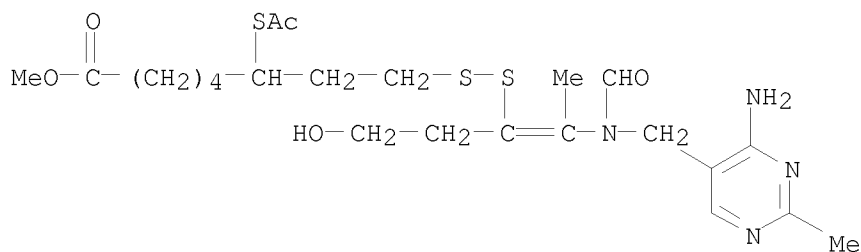
L27 ANSWER 75 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:160925 CAPLUS  
 DOCUMENT NUMBER: 128:261942  
 ORIGINAL REFERENCE NO.: 128:51767a,51770a  
 TITLE: Stable vitamin B1 liquid formulations  
 INVENTOR(S): Sasaki, Yuichi; Kano, Akira; Nakajima, Toshiaki; Ito, Yuji  
 PATENT ASSIGNEE(S): Taisho Pharmaceutical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 10067660	A	19980310	JP 1997-158713	19970616
PRIORITY APPLN. INFO.:				JP 1996-159917	A 19960620
AB	Formulations contain H3PO4 and/or HCl as pH regulators. Thus, an internal formulation contained vitamin B1 nitrate 3, vitamin B2 3, vitamin B6 3, nicotinamide 10, taurine 750, Ca gluconate 450, Mg asparaginate 100, KCl 20, sucrose 8000, 85% H3PO4 .apprx.350, Na benzoate 32 mg, perfume, and H2O to 50 mL.				
IT	67-16-3, Thiamine disulfide 137-86-0, Thiamine-8-(methyl-6-acetyldihydrothioctate) disulfide RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (stable vitamin B1 liquid formulations containing phosphoric and hydrochloric acid as pH regulators)				
RN	67-16-3 CAPLUS				
CN	Formamide, N,N'-[dithiobis[2-(2-hydroxyethyl)-1-methyl-2,1-ethenediyl]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]- (CA INDEX NAME)				



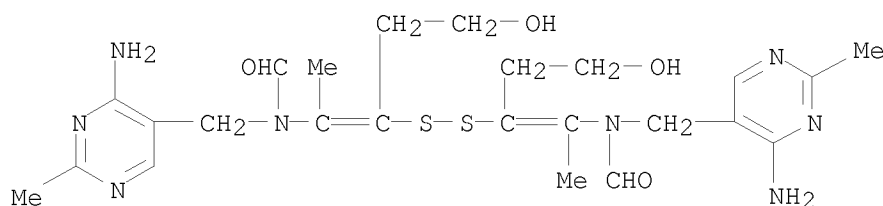
RN 137-86-0 CAPLUS  
CN Octanoic acid, 6-(acetylthio)-8-[[2-[[[(4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]-1-(2-hydroxyethyl)-1-propen-1-yl]dithio]-, methyl ester (CA INDEX NAME)



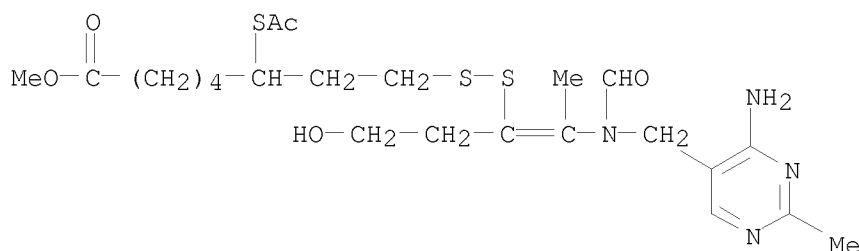
L27 ANSWER 76 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:160924 CAPLUS  
DOCUMENT NUMBER: 128:261941  
ORIGINAL REFERENCE NO.: 128:51767a, 51770a  
TITLE: Stable vitamin B1 liquid formulations  
INVENTOR(S): Sasaki, Yuichi; Kano, Akira; Nakajima, Toshiaki; Ito, Yuji  
PATENT ASSIGNEE(S): Taisho Pharmaceutical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 10067659	A	19980310	JP 1997-158712	19970616
PRIORITY APPLN. INFO.:				JP 1996-159918	A 19960620
AB	Formulations contain 1-300 mM chloride ions such as ions of KCl, CaCl <sub>2</sub> , MgCl <sub>2</sub> , and carnitine chloride. Thus, an internal formulation contained vitamin B1 nitrate 3, vitamin B2 3, vitamin B6 3, nicotinamide 10, taurine 750, Mg asparaginate 100, KCl 20, sucrose 8000, Na benzoate 32 mg, perfume, and H <sub>2</sub> O to 50 mL.				
IT	67-16-3, Thiamine disulfide 137-86-0, Thiamine-8-(methyl-6-acetyldihydrothioctate) disulfide RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (stable vitamin B1 liquid formulations containing chlorides)				
RN	67-16-3 CAPLUS				
CN	Formamide, N,N'-[dithiobis[2-(2-hydroxyethyl)-1-methyl-2,1-ethenediyl]]bis[N-[(4-amino-2-methyl-5-pyrimidinyl)methyl]- (CA INDEX NAME)				



RN 137-86-0 CAPLUS  
CN Octanoic acid, 6-(acetylthio)-8-[[2-[[[(4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]-1-(2-hydroxyethyl)-1-propen-1-yl]dithio]-, methyl ester (CA INDEX NAME)



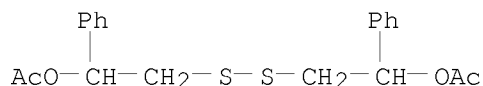
L27 ANSWER 77 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:132897 CAPLUS  
DOCUMENT NUMBER: 128:204447  
ORIGINAL REFERENCE NO.: 128:40439a, 40442a  
TITLE: Highly efficient, regio- and stereoselective ring opening of epoxides and thiiranes with Ce(OTf)<sub>4</sub>  
AUTHOR(S): Iranpoor, N.; Shekariz, M.; Shiriny, F.  
CORPORATE SOURCE: Chemistry Department, Shiraz University, Shiraz, 71454, Iran  
SOURCE: Synthetic Communications (1998), 28(2), 347-366  
CODEN: SYNCAV; ISSN: 0039-7911  
PUBLISHER: Marcel Dekker, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Ceric triflate, Ce(OTf)<sub>4</sub>, is used as an efficient catalyst for ring opening of epoxides in the presence of alcs., water, and acetic acid. The reactions proceed with high regio- and stereoselectivity and in excellent yields. The reaction of R-(+)-styrene oxide with methanol occurs with excellent optical purity. Ring opening of thiiranes in alcs., water and acetic acid, followed by dimerization to the corresponding disulfides, occurs efficiently in the presence of this reagent. A mild method for the preparation of dithianes from thiiranes and Ce(OTf)<sub>4</sub> is also described.

IT 133367-11-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (regio- and stereoselective ring opening of epoxides and thiiranes with Ce(OTf)<sub>4</sub>)

RN 133367-11-0 CAPLUS

CN Benzenemethanol,  $\alpha,\alpha'$ -[dithiobis(methylene)]bis-, diacetate  
 (9CI) (CA INDEX NAME)



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 78 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:124043 CAPLUS

DOCUMENT NUMBER: 128:201045

ORIGINAL REFERENCE NO.: 128:39619a,39622a

TITLE: Compositions of antichlamydial agents for the diagnosis and management of infection caused by chlamydia

INVENTOR(S): Mitchell, William M.; Stratton, Charles W.

PATENT ASSIGNEE(S): Vanderbilt University, USA; Mitchell, William M.; Stratton, Charles W.

SOURCE: PCT Int. Appl., 83 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

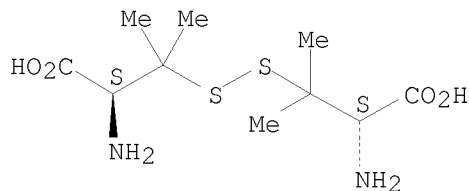
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9806435	A2	19980219	WO 1997-US14402	19970814
WO 9806435	A3	19980409		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9741516	A	19980306	AU 1997-41516	19970814
PRIORITY APPLN. INFO.:			US 1996-23921P	P 19960814
			WO 1997-US14402	W 19970814

AB The invention provides a unique approach for the diagnosis and management of infections by Chlamydia species, particularly C. pneumoniae. The invention is based, in part, on the discovery that a combination of agents directed toward the various stages of the chlamydial life cycle is effective in substantially reducing infection. Products comprising combination of antichlamydial agents, compns., and pharmaceutical packs

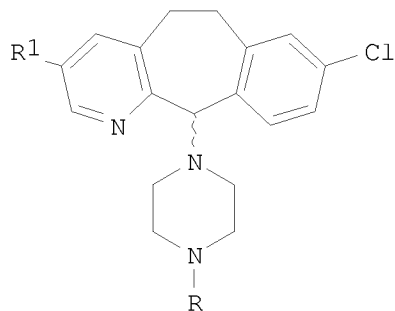
are also described.

IT 20902-45-8, D-Penicillamine disulfide  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(antichlamydial agent combinations and compns. for diagnosis and  
management of chlamydial infection)  
RN 20902-45-8 CAPLUS  
CN D-Valine, 3,3'-dithiobis- (CA INDEX NAME)

Absolute stereochemistry.



L27 ANSWER 79 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:119756 CAPLUS  
DOCUMENT NUMBER: 128:238971  
ORIGINAL REFERENCE NO.: 128:47132h, 47133a  
TITLE: Inhibitors of Farnesyl Protein Transferase. 4-Amido,  
4-Carbamoyl, and 4-Carboxamido Derivatives of  
1-(8-Chloro-6,11-dihydro-5H-benzo[5,6]cyclohepta[1,2-  
b]pyridin-11-yl)piperazine and 1-(3-Bromo-8-chloro-  
6,11-dihydro-5H-benzo[5,6]cyclohepta[1,2-b]pyridin-11-  
yl)piperazine  
AUTHOR(S): Mallams, Alan K.; Rossman, Randall R.; Doll, Ronald  
J.; Girijavallabhan, Viyyoor M.; Ganguly, Ashit K.;  
Petrin, Joanne; Wang, Lynn; Patton, Robert; Bishop, W.  
Robert; Carr, Donna M.; Kirschmeier, Paul; Catino,  
Joseph J.; Bryant, Matthew S.; Chen, Kwang-Jong;  
Korfmacher, Walter A.; Nardo, Cymbelene; Wang,  
Shiyong; Nomeir, Amin A.; Lin, Chin-Chung; Li, Zujun;  
Chen, Jianping; Lee, Suining; Dell, Janet; Lipari,  
Philip; Malkowski, Michael; Yaremko, Bodan; King,  
Ivan; Liu, Ming; et al.  
CORPORATE SOURCE: Antiinfectives and Tumor Biology Research,  
Schering-Plough Research Institute, Kenilworth, NJ,  
07033-0539, USA  
SOURCE: Journal of Medicinal Chemistry (1998), 41(6), 877-893  
CODEN: JMCMAR; ISSN: 0022-2623  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI



I

AB The synthesis of 4-amido, 4-carbamoyl and 4-carboxamido derivs. of 1-(8-chloro-6,11-dihydro-5H-benzo[5,6]cyclohepta[1,2-b]pyridin-11-yl)piperazine (I; R = R1 = H) to explore the SAR of of this series of FPT inhibitors is described. I (R = 4-pyridylacetyl; R1 = H) and I (R = 3-pyridylacetyl; R1 = H) were both orally active but were rapidly metabolized in vivo. Identification of the principal metabolites led to the synthesis of a variety of new compds. that would be less readily metabolized, the most interesting of which were the 3- and 4-pyridylacetyl N-oxides. Novel replacements for the pyridylacetyl moiety were sought, and this resulted in the discovery of the N-methyl- and N-carboxamido-4-piperidinylacetyl derivs. All of these derivs. exhibited greatly improved pharmacokinetics. The synthesis of the corresponding 3-bromo analogs resulted in the discovery of (±)-I (R = 4-pyridylacetyl N-oxide; R1 = Br) [(±)-II] and (11S)-II and the (±)-N-carboxamido-4-piperidinylacetyl derivative, all of which exhibited potent FPT inhibition in vitro. All three showed excellent oral bioavailability in vivo in nude mice and cynomolgus monkeys and exhibited excellent antitumor efficacy against a series of tumor cell lines when dosed orally in nude mice.

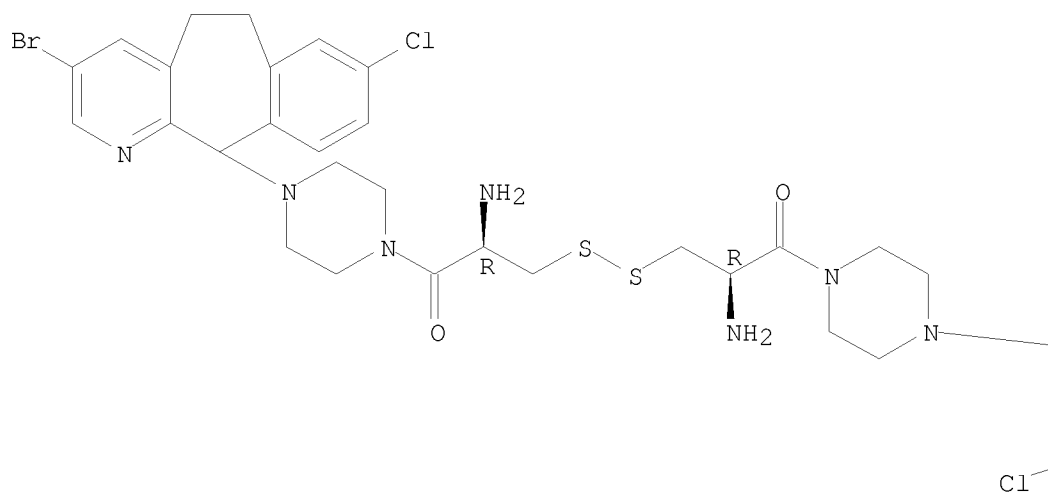
IT 205044-11-7P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation of chlorobenzocycloheptapyridinylpiperazines as inhibitors of farnesyl protein transferase)

RN 205044-11-7 CAPLUS

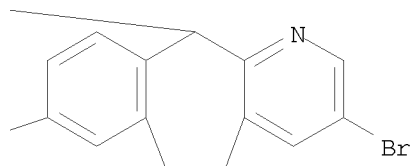
CN Piperazine, 1,1'-[dithiobis[(2R)-2-amino-1-oxo-3,1-propanediyl]]bis[4-(3-bromo-8-chloro-6,11-dihydro-5H-benzo[5,6]cyclohepta[1,2-b]pyridin-11-yl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

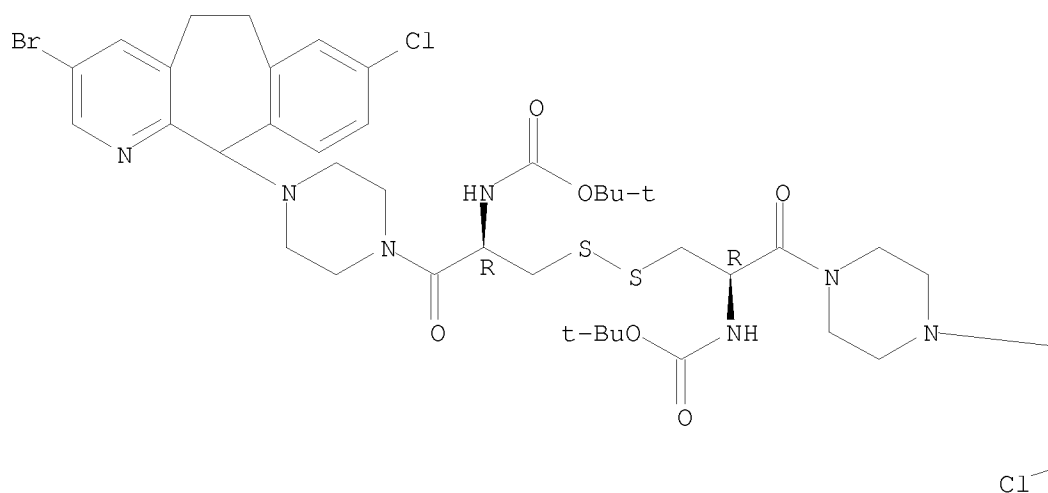


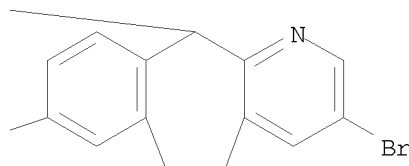




IT 205044-76-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of chlorobenzocycloheptapyridinylpiperazines as inhibitors of  
 farnesyl protein transferase)  
 RN 205044-76-4 CAPLUS  
 CN 11-Oxa-5,6-dithia-2,9-diazatridecanoic acid, 3,8-bis[[4-(3-bromo-8-chloro-  
 6,11-dihydro-5H-benzo[5,6]cyclohepta[1,2-b]pyridin-11-yl)-1-  
 piperazinyl]carbonyl]-12,12-dimethyl-10-oxo-, 1,1-dimethylethyl ester,  
 (3R,8R)- (CA INDEX NAME)

Absolute stereochemistry.





REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 80 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:48315 CAPLUS

DOCUMENT NUMBER: 128:185059

ORIGINAL REFERENCE NO.: 128:36471a,36474a

TITLE: Reactivity in self-assembled monolayers: effect of the distance from the reaction center to the monolayer-solution interface

AUTHOR(S): Chechik, Victor; Stirling, Charles J. M.

CORPORATE SOURCE: Centre for Molecular Materials and Dep. of Chemistry, University of Sheffield, Sheffield, S3 7HF, UK

SOURCE: Langmuir (1998), 14(1), 99-105

CODEN: LANGD5; ISSN: 0743-7463

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Monolayers containing a reactive p-nitrophenyl ester group at different levels with respect to the monolayer interface have been self-assembled on a gold surface. Anal. of grazing angle IR spectra, surface plasmon resonance (SPR), and wettability measurements suggests disordered organization of the alkane chains in the monolayers. Kinetics of monolayer reactions with external reagents (alkylamines) have been studied and compared with those of the same process in bulk medium. Burying of a reaction center under the surface and other structural changes of monolayers were shown to have only a minor effect on the rates of reaction, implying that these monolayers could be easily penetrated by guest mols. The higher reaction rates with monolayers than in bulk solution are possibly due to a weak binding of the external reagent to the monolayer prior to reaction.

IT 203255-28-1P 203255-29-2P 203255-30-5P  
203255-31-6P 203255-32-7P 203255-33-8P  
203255-35-0P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(reactivity of monolayers containing a reactive p-nitrophenyl ester group at different levels with respect to the monolayer interface self-assembled on a gold surface)

RN 203255-28-1 CAPLUS

CN Hexanoic acid, 6,6'-[dithiobis[[1-oxo-2-[(1-oxohexyl)amino]-3,1-propanediyl]imino]]bis-, bis(4-nitrophenyl) ester, [R-(R\*,R\*)]-(9CI) (CA

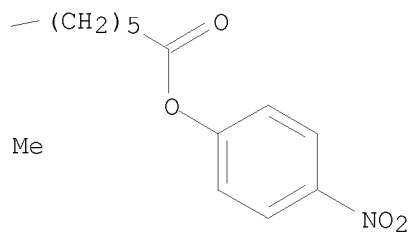
Absolute stereochemistry.

CN(C)C(=O)[C@H](CS[C@@H](C(=O)N)CC(=O)NCCOC1=CC=C([N+](=O)[O-])C=C1)CC(=O)NCCOC1=CC=C([N+](=O)[O-])C=C1CCCCC(=O)Oc1ccc([N+](=O)[O-])cc1

CN	Hexanoic acid, 6,6'-[dithiobis[[1-oxo-2-[(1-oxooctyl)amino]-3,1-propanediyl]imino]]bis-, bis(4-nitrophenyl) ester, [R-(R*,R*)]- (9CI)	(CA INDEX NAME)
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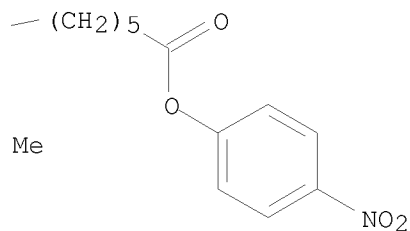
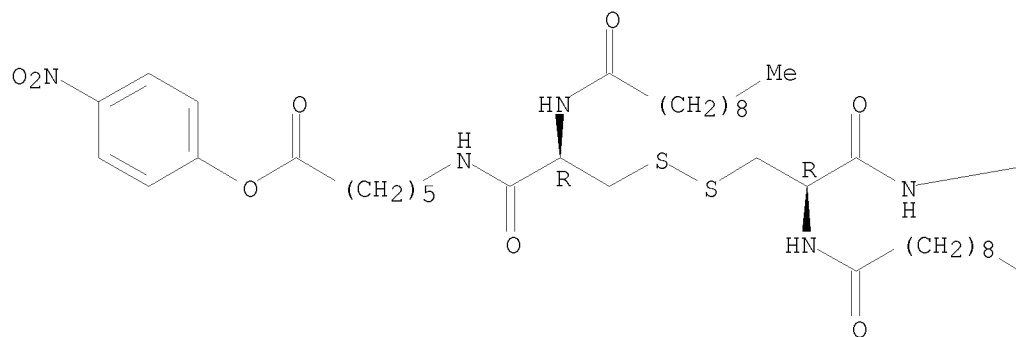
Absolute stereochemistry.

CN(C)C(=O)[C@H](CS[C@@H](C)C(=O)NCCCNC(=O)Oc1ccc([N+](=O)[O-])cc1)C(=O)NCCCNC(=O)O



RN 203255-30-5 CAPLUS  
 CN Hexanoic acid, 6,6'-[dithiobis[[1-oxo-2-[(1-oxodecyl)amino]-3,1-propanediyl]imino]]bis-, bis(4-nitrophenyl) ester, [R-(R\*,R\*)]- (9CI) (CA INDEX NAME)

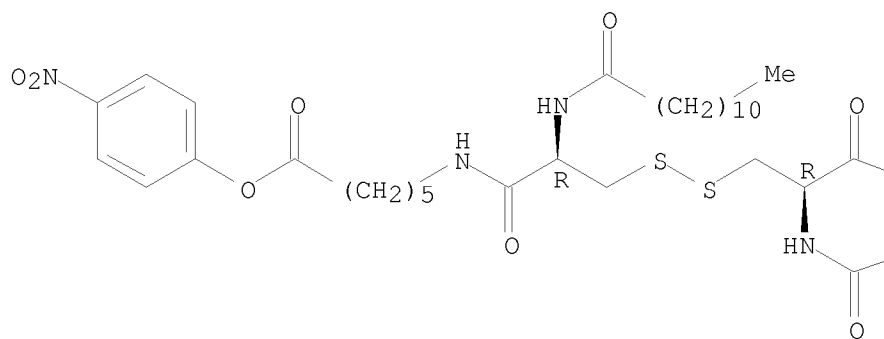
Absolute stereochemistry.



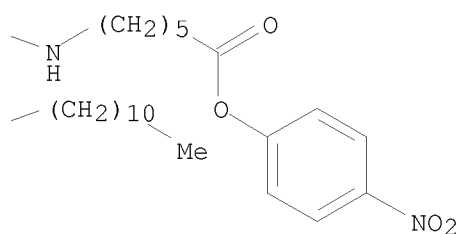
RN 203255-31-6 CAPLUS  
 CN Hexanoic acid, 6,6'-[dithiobis[[1-oxo-2-[(1-oxododecyl)amino]-3,1-propanediyl]imino]]bis-, bis(4-nitrophenyl) ester, [R-(R\*,R\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



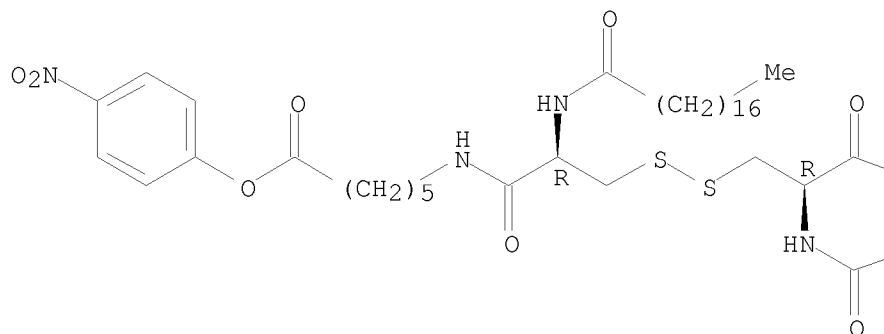
PAGE 1-B

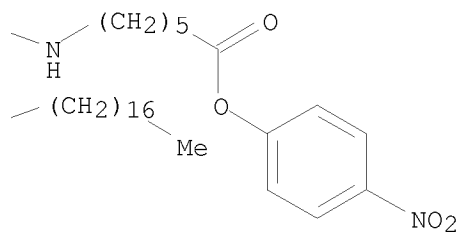


RN 203255-32-7 CAPLUS  
 CN Hexanoic acid, 6,6'-[dithiobis[[1-oxo-2-[(1-oxooctadecyl)amino]-3,1-propanediyl]imino]]bis-, bis(4-nitrophenyl) ester, [R-(R\*,R\*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

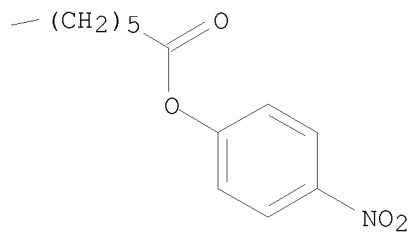
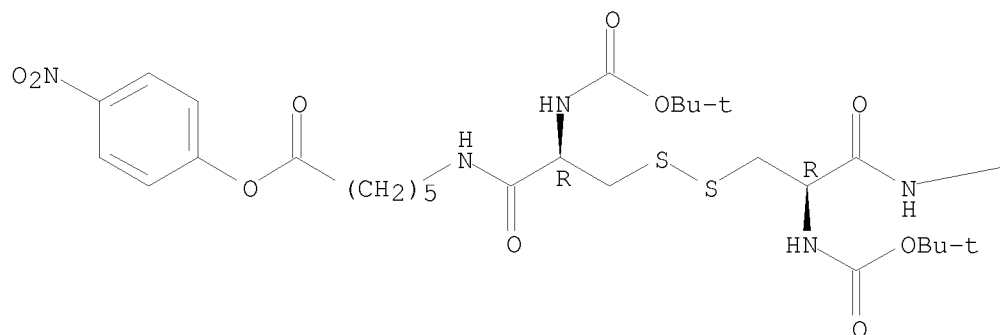




RN 203255-33-8 CAPLUS

CN 17-Oxa-11,12-dithia-7,15-diazanonadecanoic acid, 9-[[[(1,1-dimethylethoxy)carbonyl]amino]-18,18-dimethyl-14-[[[6-(4-nitrophenoxy)-6-oxohexyl]amino]carbonyl]-8,16-dioxo-, 4-nitrophenyl ester, (9R,14R)- (CA INDEX NAME)

Absolute stereochemistry.

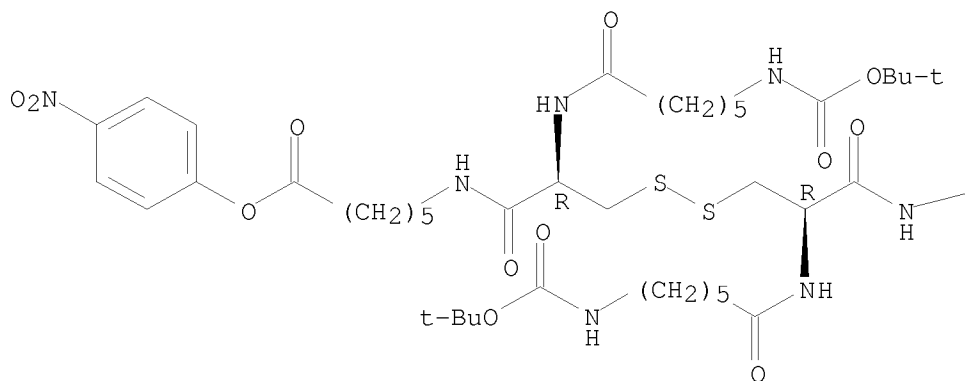


RN 203255-35-0 CAPLUS

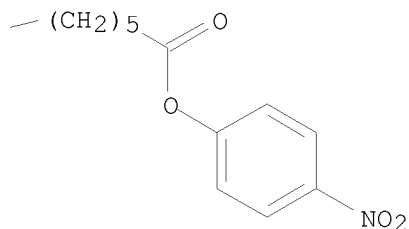
CN 12,13-Dithia-2,9,16,23-tetraazatetracosanedioic acid, 10,15-bis[[[6-(4-nitrophenoxy)-6-oxohexyl]amino]carbonyl]-8,17-dioxo-, 1,24-bis(1,1-dimethylethyl) ester, (10R,15R)- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 81 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:34211 CAPLUS

DOCUMENT NUMBER: 128:190087

ORIGINAL REFERENCE NO.: 128:37477a

TITLE: Octanol-water partition of nonzwitterionic peptides: predictive power of a molecular size-based model

AUTHOR(S): Buchwald, Peter; Bodor, Nicholas

CORPORATE SOURCE: Center for Drug Discovery, University of Florida, Health Science Center, Gainesville, FL, 32610-0497, USA

SOURCE: Proteins: Structure, Function, and Genetics (1998), 30(1), 86-99

CODEN: PSFGEY; ISSN: 0887-3585

PUBLISHER: Wiley-Liss, Inc.

DOCUMENT TYPE: Journal

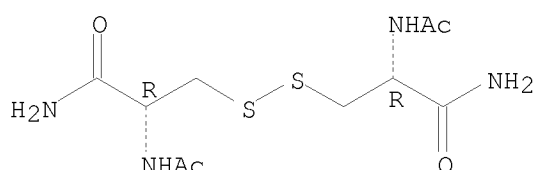
LANGUAGE: English

AB A remarkably simple, mol. size-based model developed to predict octanol-water partition coeffs. for organic compds. is tested on a set of 188 neutral peptides with available exptl. partition data. Despite using only two parameters, it gives a promising correlation ( $r^2 = 0.914$ ;  $\sigma = 0.455$ ,  $F = 1978.0$ ), and predictions are in a realistic range even for

larger peptides (cyclosporin, melanotan, sandostatin) where common, overparametrized fragment methods become quite unreliable. Ion-pair partitioning and the extraction constant formalism is briefly reviewed to describe the sigmoidal lipophilicity profile of ionizable, nonzwitterionic peptides. It seems possible to extend the present model to estimate apparent partition coeffs. measured around neutral pH and physiol. conditions for monoionic peptides; however, as no standard conditions are yet defined and only relatively small number of exptl. data are available, the situation here is more complex.

IT 16359-16-3  
 RL: PRP (Properties)  
 (octanol-water partition of nonzwitterionic peptides and predictive power of mol. size-based model)  
 RN 16359-16-3 CAPLUS  
 CN Propanamide, 3,3'-dithiobis[2-(acetilamino)-, (2R,2'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 82 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:15465 CAPLUS

DOCUMENT NUMBER: 128:188534

ORIGINAL REFERENCE NO.: 128:37108h,37109a

TITLE: Pain-suppressive effects on various nociceptive stimuli (thermal, chemical, electrical and inflammatory) of the first orally active enkephalin-metabolizing enzyme inhibitor RB 120

AUTHOR(S): Noble, Florence; Smadja, Claire; Valverde, Olga; Maldonado, Rafael; Coric, Pascale; Turcaud, Serge; Fournie-Zaluski, Marie-Claude; Roques, Bernard P.

CORPORATE SOURCE: Avenue de l'Observatoire, UFR des Sciences Pharmaceutiques et Biologiques 4, URA D 1500, CNRS, INSERM U266, Departement de Pharmacochimie Moleculaire et Structurale, Universite Rene Descartes, Paris, 75270, Fr.

SOURCE: Pain (1997), 73(3), 383-391  
 CODEN: PAINDB; ISSN: 0304-3959

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB RB 101 (N-((R,S)-2-benzyl-3[(S)(2-amino-4-methylthio)butyldithio]-1-oxopropyl)-1-phenylalanine benzyl ester) is a full inhibitor of the enkephalin-catabolizing enzymes, which induces strong naloxone-reversible antinociceptive responses after i.v. or i.p. administration, but is only slightly active after oral administration. Chemical modifications were introduced on this compound, resulting in mols. such as RB 120 (N-((S)-2-benzyl-3[(S)(2-amino-4-methylthio)butyldithio]-1-oxopropyl)-1-alanine benzyl ester), which was selected for a complete study, after oral administration, in various assays commonly used to select analgesics: mouse hot plate test, rat tail-flick test, elec. stimulation of the tail in rats, paw pressure test on inflamed paws in rats, acetic acid-induced writhing test and the formalin test in mice. RB 120 induced potent



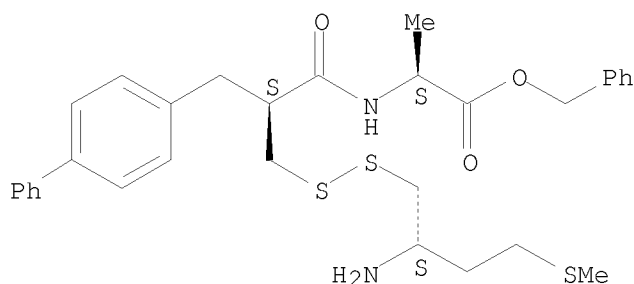
dose-dependent antinociceptive responses in all these tests after oral administration. The differences in antinociceptive effects induced by RB 120 in the various assays is probably related to the amount of enkephalins released and to the efficiency of peptidase inactivation in particular brain regions implicated in the control of a given nociceptive input. The goal of discovering orally active analgesics endowed with a potency similar to that of morphine but devoid of its major side-effects, seems now to have been reached with mixed neutral endopeptidase/aminopeptidase N (NEP/APN) inhibitors, although these compds. have yet to be evaluated in clin. trials.

IT 203396-45-6 203396-47-8 203498-62-8, RB  
101-error  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(analgesic activity of enkephalin-metabolizing enzyme inhibitor RB 120)  
RN 203396-45-6 CAPLUS  
CN L-Alanine, N-[(2S)-3-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]-2-([1,1'-biphenyl]-4-ylmethyl)-1-oxopropyl]-, phenylmethyl ester, monomethanesulfonate (9CI) (CA INDEX NAME)

CM 1

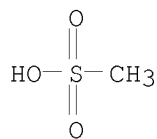
CRN 203396-44-5  
CMF C31 H38 N2 O3 S3

Absolute stereochemistry.



CM 2

CRN 75-75-2  
CMF C H4 O3 S

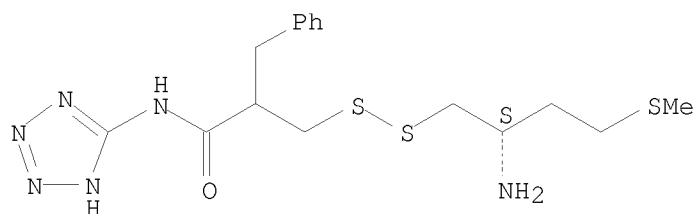


RN 203396-47-8 CAPLUS  
CN Benzenepropanamide,  $\alpha$ -[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-N-2H-tetrazol-5-yl-, methanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 203396-46-7  
CMF C16 H24 N6 O S3

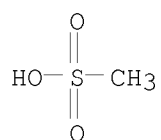
Absolute stereochemistry.



CM 2

CRN 75-75-2

CMF C H4 O3 S



RN 203498-62-8 CAPLUS

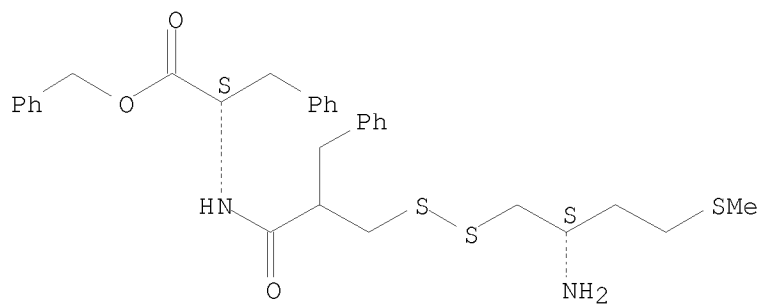
CN L-Phenylalanine, N-[2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester, methanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 135949-60-9

CMF C31 H38 N2 O3 S3

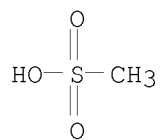
Absolute stereochemistry.



CM 2

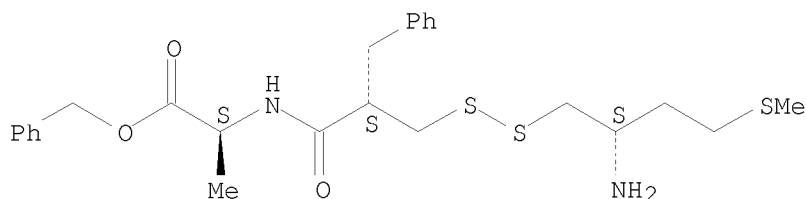
CRN 75-75-2

CMF C H4 O3 S

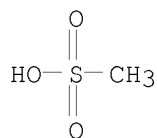


IT 203497-86-3  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (analgesic activity of enkephalin-metabolizing enzyme inhibitor RB 120)  
 RN 203497-86-3 CAPLUS  
 CN L-Alanine, N-[(2S)-2-[[[(2S)-2-amino-4-(methylthio)butyl]dithio]methyl]-1-oxo-3-phenylpropyl]-, phenylmethyl ester, monomethanesulfonate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 203497-85-2  
 CMF C25 H34 N2 O3 S3

Absolute stereochemistry.



CM 2  
 CRN 75-75-2  
 CMF C H4 O3 S



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 83 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:6960 CAPLUS  
 DOCUMENT NUMBER: 128:74023  
 ORIGINAL REFERENCE NO.: 128:14451a,14454a  
 TITLE: MHC-peptide binding: dimers of cysteine-containing nonapeptides bind with high affinity to HLA-A2.1 class I molecules  
 AUTHOR(S): Di Modugno, Francesca; Mami, Caterina; Rosano, Laura; Rubiu, Oriana; Nistico, Paola; Chersi, Alberto  
 CORPORATE SOURCE: Laboratories of Biochemistry, Immunology, and Medical Physics, Istituto Regina Elena for Cancer Research, Rome, 00158, Italy  
 SOURCE: Journal of Immunotherapy (1997), 20(6), 431-436  
 CODEN: JOIMF8; ISSN: 1053-8550  
 PUBLISHER: Lippincott-Raven Publishers  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Small peptides, 8-10 amino acids long, derived from degradation of cytoplasmic proteins by CD8+ cytolytic T lymphocytes (CTLs) associated with major histocompatibility complex (MHC) class I mols. Recently synthetic

peptides were used for the in vitro induction of tumor-specific CTLs, offering another strategy in the study of the immune-response repertoire and providing a new total in cancer vaccination and immunotherapy. Peptides derived from otherwise normal proteins, overexpressed in many tumors as products of the protooncogene, may represent a target for an immune response. This is the case of HER-2/neu gene (also known as ErbB-2), encoding a cysteine-rich glycoprotein transmembrane receptor with tyrosine kinase activity (gp185neu). Recent data, demonstrating that HLA-A2.1-related peptides are able to stimulate in vitro CD8+ lymphocytes, prompted us to study the binding to HLA-A2.1 mols. of several gp185 synthetic peptides containing a cysteine residue and to define the relevance of this amino acid residue in the reduced or oxidated form of the sulfhydryl group. We found that monomers and their homodimers, linked by a disulfide bridge, bind to HLA-A2.1 mols. with overlapping affinity. These results suggest that addnl. amino acids of the nonapeptide do not prevent the binding and the HLA refolding through chemical or sterical interactions. This might be of particular relevance for the in vivo processing of cysteine-rich proteins. Because ErbB-2 mols., as tumor-differentiation antigens in melanoma, are cysteine-rich mols., it may be relevant to evaluate the possible role of the cysteine residues interacting with the T-cell receptor. The recognition of these heterodimers by CD8+ lymphocytes will require functional in vivo studies.

IT 200799-23-1 200799-24-2 200799-29-7

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)

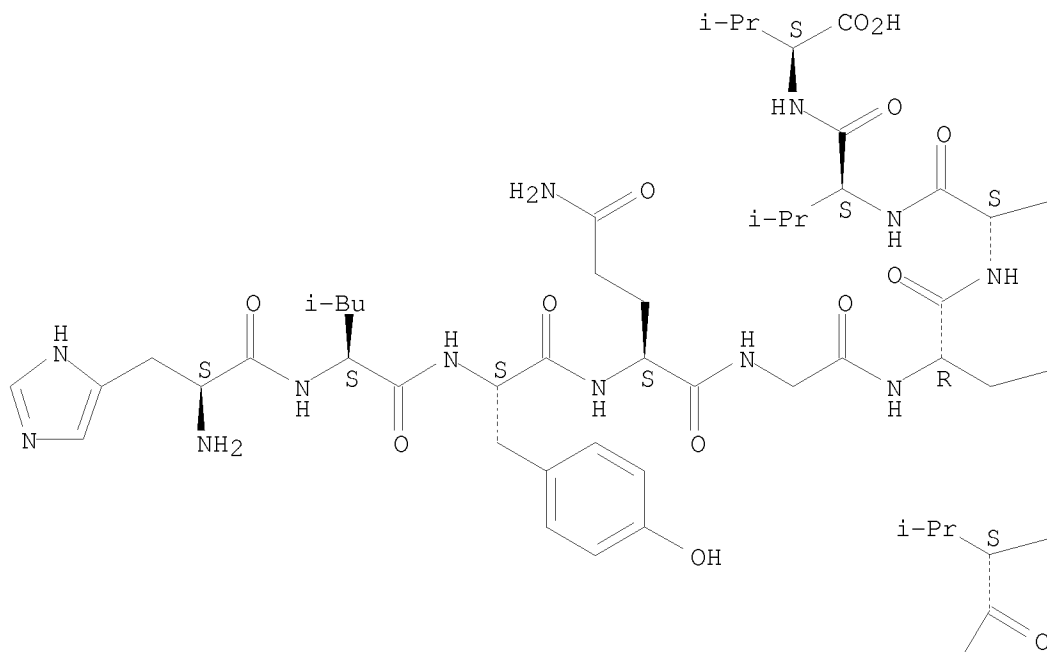
(binding of cysteine-containing nonapeptides of gp185neu kinase to HLA-A2.1 mols. and their possible use in antitumor vaccines)

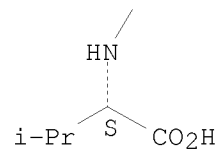
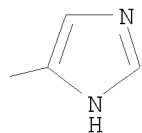
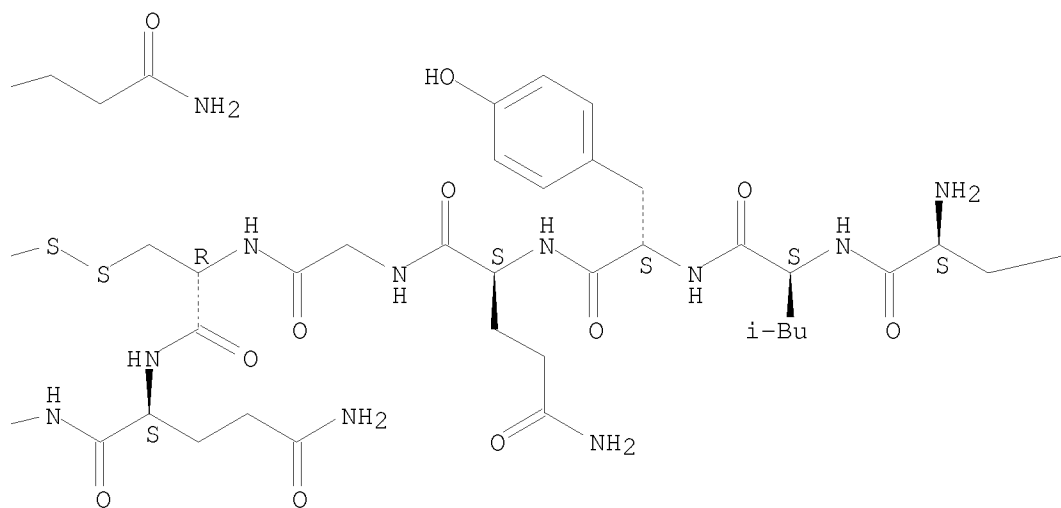
RN 200799-23-1 CAPLUS

CN L-Valine, L-histidyl-L-leucyl-L-tyrosyl-L-glutaminyglycyl-L-cysteinyl-L-glutaminy-L-valyl-, bimol. (6→6')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

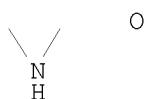




RN 200799-24-2 CAPLUS  
 CN L-Valine, L-cysteinyl-L-leucyl-L-threonyl-L-seryl-L-threonyl-L-valyl-L-glutaminyll-L-leucyl-, bimol. (1→1')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

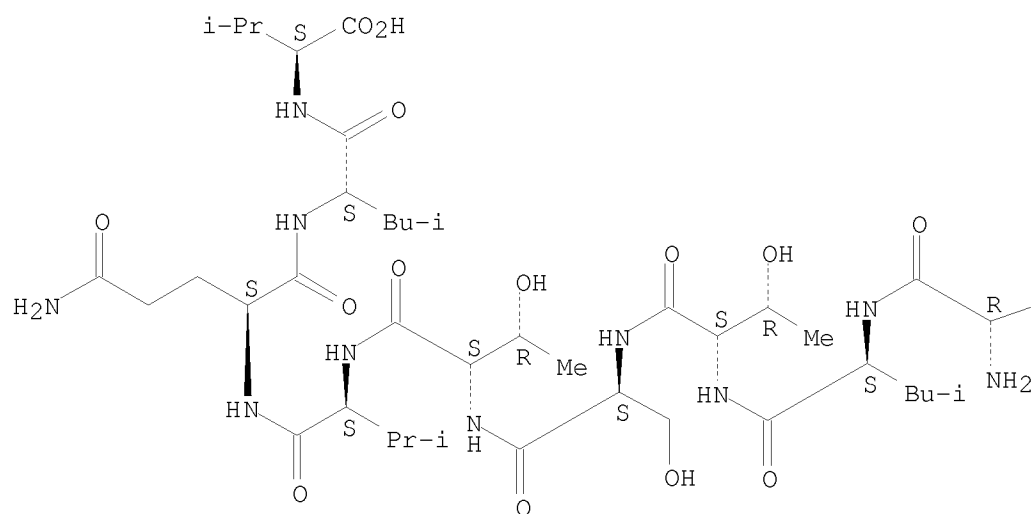


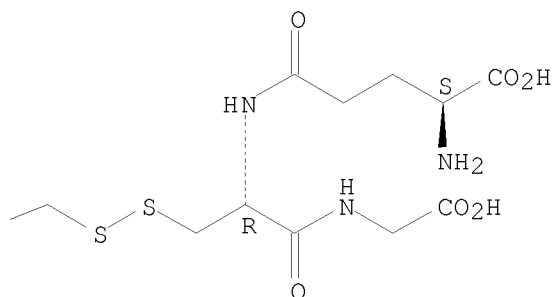
—NH<sub>2</sub>

RN 200799-29-7 CAPLUS

CN L-Valine, L-cysteinyl-L-leucyl-L-threonyl-L-seryl-L-threonyl-L-valyl-L-glutamyl-L-leucyl-, (1→2')-disulfide with L-γ-glutamyl-L-cysteinylglycine (9CI) (CA INDEX NAME)

Absolute stereochemistry.





REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 84 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:799612 CAPLUS

DOCUMENT NUMBER: 128:84569

ORIGINAL REFERENCE NO.: 128:16385a,16388a

TITLE: Vasopressin fragment, AVP-(4-8), improves long-term and short-term memory in the hole board search task

AUTHOR(S): Vawter, M. P.; De Wied, D.; Van Ree, J. M.

CORPORATE SOURCE: Dep. Pharmacology, Rudolf Magnus Inst. Neurosciences, Utrecht Univ., Utrecht, 3584 CG, Neth.

SOURCE: Neuropeptides (Edinburgh) (1997), 31(5), 489-494  
CODEN: NRPPDD; ISSN: 0143-4179

PUBLISHER: Churchill Livingstone

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The hole board search task (HBST) measures long-term and short-term memory, operationally defined as reference memory and working memory. The HBST is an open-field spatial learning test. Previously, the authors have shown that desglycinamide(Arg8) vasopressin (DGAVP) modulated reference memory, working memory, spatial sequence memory, and learning in the HBST in a dose-dependent manner. To examine the potential active site of the DGAVP mol., the fragment of the vasopressin amino acid sequence, [pGlu4,Cyt6]AVP-(4-8) (AVP (4-8)), was administered 1 h prior to training the HBST. Three groups received either 0, 0.3 µg, or 1 µg AVP-(4-8). A repeated measures MANOVA showed the AVP-(4-8) pretreatment factor to be significant on the reference memory measure, but not the working memory or learning measures. Interactions between peptide + sessions for reference memory, working memory and learning indicated differences in improvement over sessions between placebo- and peptide-treated groups. Post hoc comparisons revealed that the AVP-(4-8) fragment in a dose of 0.3 µg increased reference memory on the fourth, fifth and sixth acquisition sessions compared with placebo or 1 µg AVP (4-8) pretreated groups. Working memory and errors were significantly lowered by 0.3 g AVP-(4-8) on the first acquisition session when compared with placebo pretreatment. Thus, AVP-(4-8) improves long-term and short-term memory scores in the HBST, similar to previous results with DGAVP. However, AVP-(4-8) appears twice as potent than DGAVP in improving long-term memory scores in the HBST. The data suggest that the memory modulating property of DGAVP is contained within the amino acid sequence of the AVP-(4-8) peptide.

IT 87558-80-3

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(vasopressin fragment AVP-(4-8) improves long-term and short-term

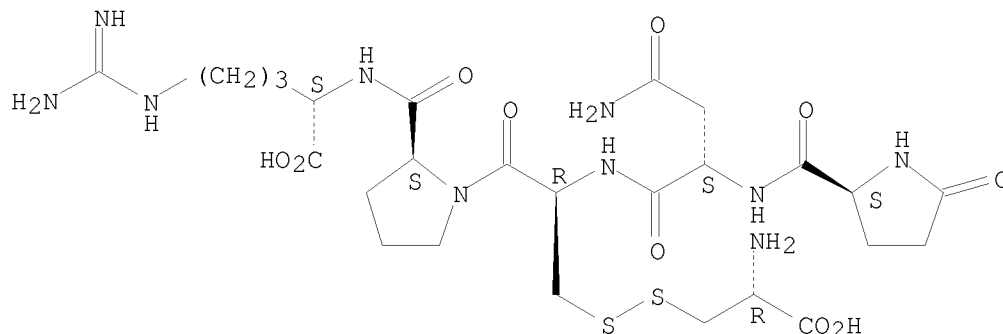


memory in hole board search task)

RN 87558-80-3 CAPLUS

CN L-Arginine, 5-oxo-L-prolyl-L-asparaginyl-L-cysteinyl-L-prolyl-, disulfide with L-cysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 85 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:790833 CAPLUS

DOCUMENT NUMBER: 128:102376

ORIGINAL REFERENCE NO.: 128:20069a,20072a

TITLE: Solid phase synthesis of polyamine conjugates for the study of trypanothione reductase

AUTHOR(S): Marsh, Ian R.; Bradley, Mark

CORPORATE SOURCE: Department of Chemistry, University of Southampton, Southampton, SO17 1BJ, UK

SOURCE: Tetrahedron (1997), 53(51), 17317-17334

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several polyamine scaffolds were synthesized, enabling the facile preparation of a variety of polyamine conjugates using both BOC and Fmoc protecting group strategies. Products were released from the solid support by treatment with either triflic acid/trifluoroacetic acid or trifluoroacetic acid. The trypanosomal metabolite N1,N8-bis(glutathionyl)spermidine, i.e. trypanothione, and a range of related analogs were prepared for biol. evaluation as previously communicated.

IT 108081-77-2P 201211-62-3P

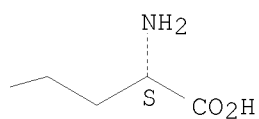
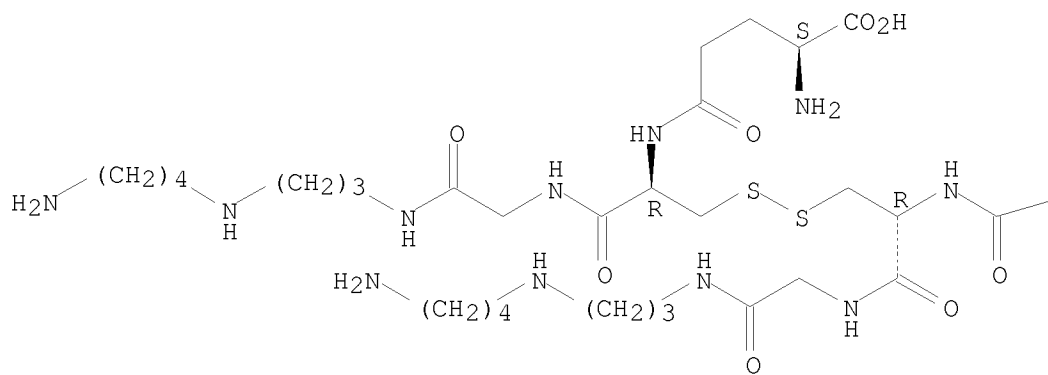
RL: SPN (Synthetic preparation); PREP (Preparation)

(solid phase synthesis of polyamine conjugates for the study of trypanothione reductase)

RN 108081-77-2 CAPLUS

CN Glycinamide, L-γ-glutamyl-L-cysteinyl-N-[3-[(4-aminobutyl)amino]propyl]-, bimol. (2→2')-disulfide (CA INDEX NAME)

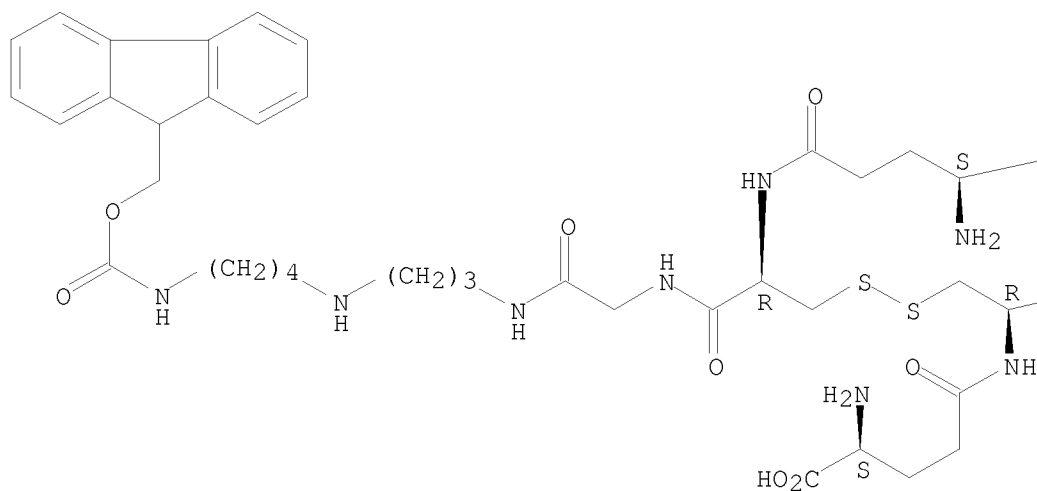
Absolute stereochemistry.

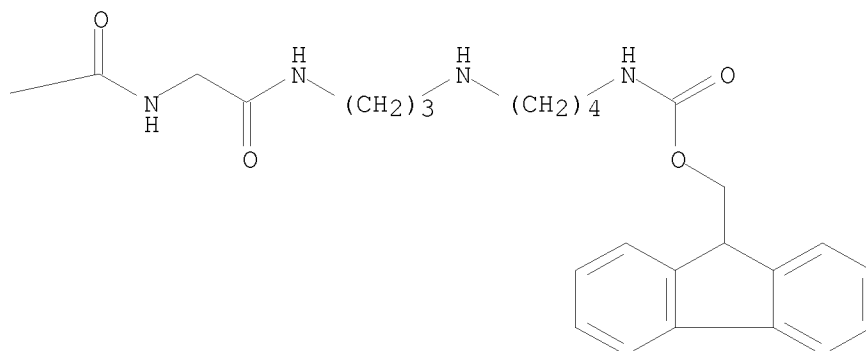


RN 201211-62-3 CAPLUS

CN Glycinamide, L- $\gamma$ -glutamyl-L-cysteinyl-N-[3-[[4-[(9H-fluoren-9-ylmethoxy)carbonyl]amino]butyl]amino]propyl]-, bimol. (2 $\rightarrow$ 2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



—CO<sub>2</sub>H

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 86 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:783017 CAPLUS

DOCUMENT NUMBER: 128:127677

ORIGINAL REFERENCE NO.: 128:25075a, 25078a

TITLE: Aqueous Media Effect on Molecular Recognition.  
II. Temperature Dependence of Chemical Selectivity in Alcohols and Water

AUTHOR(S): Endo, Tadashi; Aono, Yoshihiro; Yazawa, Takashi;  
Hayashi, Munetoshi; Yokose, Yuuichi; Iida, Takahiro;  
Isago, Takashi

CORPORATE SOURCE: Aoyama Gakuin University, Chitosedai, Setagaya-ku,  
Tokyo, 157, Japan

SOURCE: Bulletin of the Chemical Society of Japan (1997),  
70(12), 3047-3053

CODEN: BCSJA8; ISSN: 0009-2673

PUBLISHER: Chemical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Oxidation of associating thiols HSCH<sub>2</sub>C(O)NHC(O)NHR<sub>1</sub> [I; R<sub>1</sub> = Bu, pentyl, decyl, Ph] and HSCH<sub>2</sub>CH<sub>2</sub>NHC(O)NHC(O)R<sub>2</sub> [II; R<sub>2</sub> = Bu, pentyl, decyl, isopentyl, hexyl], each having a binding site [—C(=O)NHC(=O)NH—] and a recognition site (R<sub>1</sub> or R<sub>2</sub>), is examined at several temps. in alcs. (MeOH, EtOH, n-PrOH, and i-PrOH) and water. The selectivity (r), a measure of mol. recognition of I by II (or vice versa), in the oxidation is defined as the logarithmic ratio of the yield of an unsym. disulfide to twice that of a sym. one. It is found that the selectivity in the alcs. each decreases markedly with increasing temperature except for one case, whereas that in water increases with

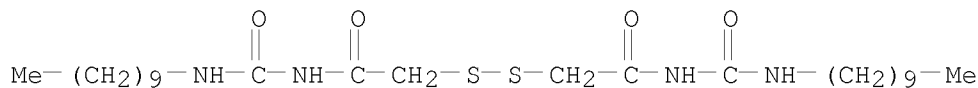
increasing temperature Correlation of the observed selectivity with factors affecting the selectivity (e.g., intermol. association, physicochem. properties of solvents, and hydrophobic interaction) is discussed.

IT 202071-81-6P 202071-82-7P 202071-83-8P  
202071-84-9P

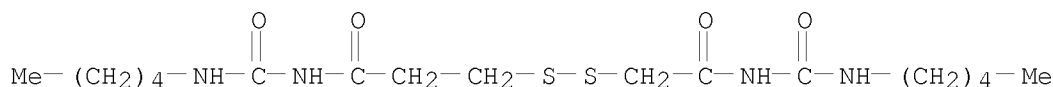
RL: SPN (Synthetic preparation); PREP (Preparation)

(temperature dependence of chemical selectivity for oxidation of associating thiols in alcs. and water)

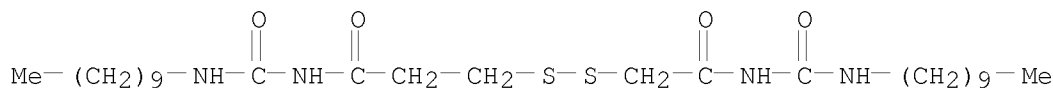
RN 202071-81-6 CAPLUS  
 CN 5,6-Dithia-2,9,11-triazaheneicosanamide, N-decyl-3,8,10-trioxo- (9CI) (CA INDEX NAME)



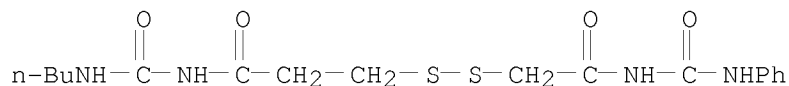
RN 202071-82-7 CAPLUS  
 CN 5,6-Dithia-2,10,12-triazaheptadecanamide, 3,9,11-trioxo-N-pentyl- (CA INDEX NAME)



RN 202071-83-8 CAPLUS  
 CN Propanamide, N-[(decylamino)carbonyl]-3-[[2-[(decylamino)carbonyl]amino]-2-oxoethyl]dithio]- (CA INDEX NAME)



RN 202071-84-9 CAPLUS  
 CN 5,6-Dithia-2,10,12-triazahexadecanamide, 3,9,11-trioxo-N-phenyl- (CA INDEX NAME)



REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 87 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:777400 CAPLUS

DOCUMENT NUMBER: 128:55618

ORIGINAL REFERENCE NO.: 128:10741a

TITLE: Dimethyl N,N'-bis(endo-himmoyl)-(R,R)-cystine

AUTHOR(S): Hibbs, David E.; Hursthouse, Michael B.; Malik, K. M. Abdul; North, Michael

CORPORATE SOURCE: Dep. Chem., Univ. Wales, Cardiff, CF1 3TB, UK

SOURCE: Acta Crystallographica, Section C: Crystal Structure Communications (1997), C53(11), 1701-1703  
 CODEN: ACSCEE; ISSN: 0108-2701

PUBLISHER: Munksgaard International Publishers Ltd.

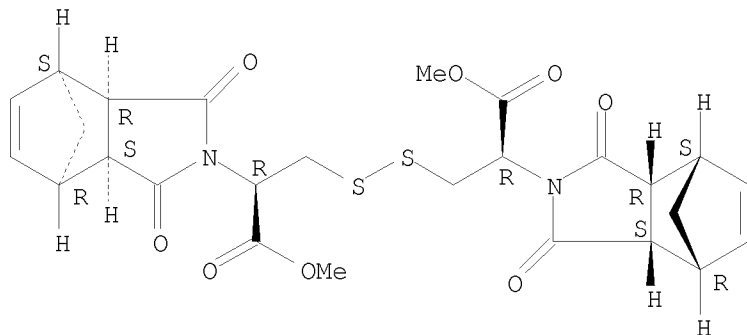
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The title compound is orthorhombic, space group P212121, with a 8.3900(9), b 13.270(2), and c 23.2580(15) Å; Z = 4, dc = 1.438; R = 0.073, Rw(F2) = 0.194 for 3896 reflections. The compound contains two norbornene rings, both with endo substituents, and an (M)-helical disulfide. Both ester groups adopt the s-cis conformation, and the bond lengths and angles are within the expected values.

IT 200063-86-1  
 RL: PRP (Properties)  
 (crystal structure of)  
 RN 200063-86-1 CAPLUS  
 CN 4,7-Methano-2H-isoindole-2-acetic acid,  $\alpha,\alpha'$ -  
 [dithiobis(methylene)]bis[1,3,3a,4,7,7a-hexahydro-1,3-dioxo-, dimethyl  
 ester, [3aR-[2[R\*[R\*(3'aR\*,4'S\*,7'R\*,7'aS\*)]],3a $\alpha$ ,4 $\alpha$ ,7 $\alpha$ ,  
 7a $\alpha$ ]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 88 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:773109 CAPLUS  
 DOCUMENT NUMBER: 127:359117  
 ORIGINAL REFERENCE NO.: 127:70307a,70310a  
 TITLE: Peptide fragment showing biological activity of insulin  
 INVENTOR(S): Dyumaev, Kirill M.; Knyazhev, Vladimir A.; Archakov, Aleksandr I.; Prozorovskij, Vladimir N.; Ipatova, Olga M.; Guseva, Mariya K.; Alekseeva, Aleksandra E.; Grebenshchikova, Olga G.; Maksimova, Elena M.; Kutsenko, Natalya G.  
 PATENT ASSIGNEE(S): Nauchno-Issledovatel'skij Institut Biomeditsinskij Khimii RAMN, Russia  
 SOURCE: Russ. From: Izobreteniya 1997, (13), 103.  
 CODEN: RUXXE7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Russian  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2078769	C1	19970510	RU 1995-114858	19950818
PRIORITY APPLN. INFO.:			RU 1995-114858	19950818

AB Title only translated.

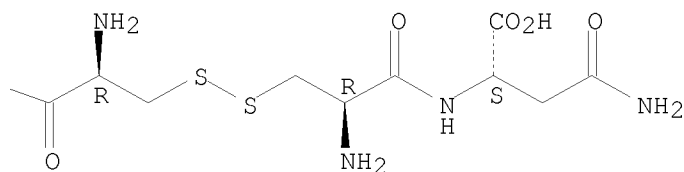
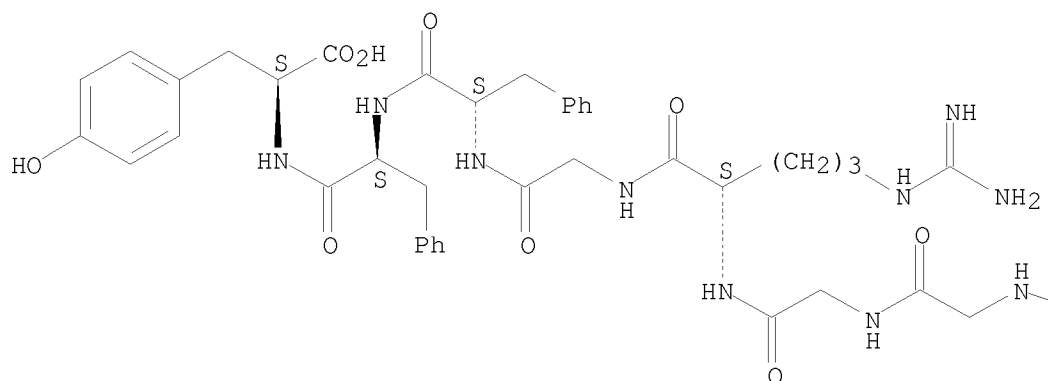
IT 198479-32-2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (peptide fragment showing biol. activity of insulin)

RN 198479-32-2 CAPLUS

CN L-Tyrosine, L-cysteinylglycylglycyl-L-arginylglycyl-L-phenylalanyl-L-phenylalanyl-, (1-1')-disulfide with L-cysteinyl-L-asparagine (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.



L27 ANSWER 89 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:752111 CAPLUS

DOCUMENT NUMBER: 128:99098

ORIGINAL REFERENCE NO.: 128:19317a,19320a

TITLE: The effects of guanidine hydrochloride on the "random coil" conformations and NMR chemical shifts of the peptide series GGXGG

AUTHOR(S): Plaxco, Kevin W.; Morton, Craig J.; Grimshaw, Shaun B.; Jones, Jonathan A.; Pitkeathly, Maureen; Campbell, Iain D.; Dobson, Christopher M.

CORPORATE SOURCE: Oxford Centre for Molecular Sciences, New Chemistry Laboratory, University of Oxford, Oxford, OX1 3QT, UK

SOURCE: Journal of Biomolecular NMR (1997), 10(3), 221-230

CODEN: JBNME9; ISSN: 0925-2738

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effects of the commonly used denaturant guanidine hydrochloride (GuHCl) on the random coil conformations and NMR chemical shifts of the proteogenic amino acids have been characterized using the peptide series Ac-Gly-Gly-X-Gly-Gly-NH<sub>2</sub>. The  $\phi$  angle-sensitive coupling consts., ROESY cross peak intensities and proline cis-trans isomer ratios of a representative subset of these peptides are unaffected by GuHCl, which

suggests that the denaturant does not significantly perturb intrinsic backbone conformational preferences. A set of  $3J_{HNH\alpha}$  values is presented which agree well with predictions of recently developed models of the random coil. We have also measured the chemical shifts of all 20 proteogenic amino acids in these peptides over a range of GuHCl concns. The shifts exhibit a linear dependence on denaturant concentration and we

report

here correction factors for the calcn. of "random coil"  $^1H$  chemical shifts at any arbitrary denaturant concentration. Studies of a representative subset of peptides indicate that  $^{13}C$  and  $^{15}N$  chemical shifts are also perturbed by the denaturant. These results should facilitate the application of chemical shift-based anal. techniques to the study of polypeptides in solution with GuHCl. The effects of the denaturant on the quality of NMR spectra and on chemical shift referencing are also addressed.

IT 201488-51-9

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)

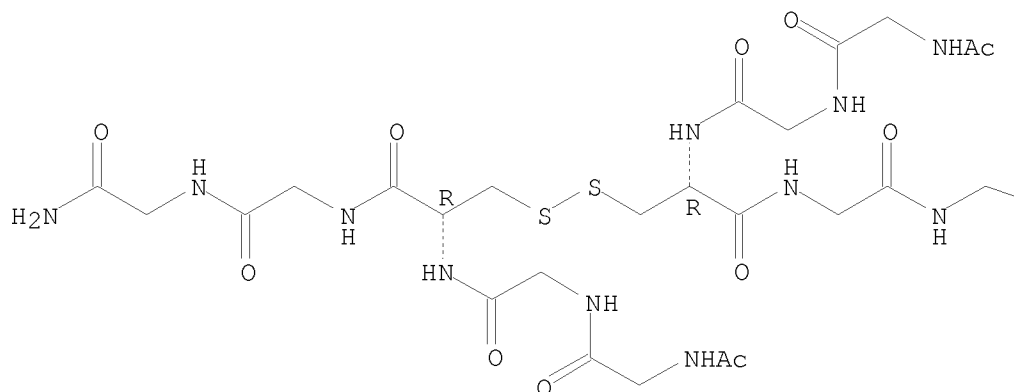
("random coil" conformations and NMR chemical shifts of the peptide series GGXGG)

RN 201488-51-9 CAPLUS

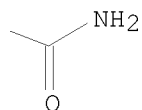
CN Glycinamide, N-acetylglycylglycyl-L-cysteinyglycyl-, bimol.  
(3→3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

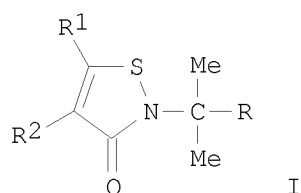


REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 90 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1997:746673 CAPLUS

DOCUMENT NUMBER: 128:22900  
ORIGINAL REFERENCE NO.: 128:4491a,4494a  
TITLE: Herbicidal isothiazolinones  
INVENTOR(S): Angermann, Alfred; Geisler, Jens; Bohner, Juergen;  
Richter, Eberhard  
PATENT ASSIGNEE(S): Hoechst Schering AgrEvo GmbH, Germany  
SOURCE: Ger. Offen., 12 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19620135	A1	19971113	DE 1996-19620135	19960507
PRIORITY APPLN. INFO.:			DE 1996-19620135	19960507
OTHER SOURCE(S):	CASREACT 128:22900; MARPAT 128:22900			
GI				

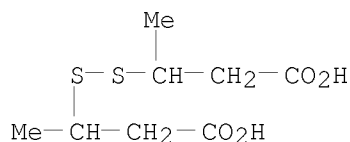


AB Approx. 20 title compds. I (R = H, Me, chlorophenyl, CONHR<sup>3</sup>, R<sup>3</sup> = Ph, tolyl, xylyl, halophenyl; R<sup>1</sup> = H, Me; R<sup>2</sup> = Ph, 2-furyl, 2-thienyl) were prepared via cyclization of [SCHR<sup>1</sup>CHR<sup>2</sup>CONH<sup>3</sup>Me<sup>2</sup>R]<sub>2</sub> by treatment with SO<sub>2</sub>Cl<sub>2</sub>. At 0.2 kg/ha aqueous I (R = m-ClC<sub>6</sub>H<sub>4</sub>, R<sup>1</sup> = Me, R<sup>2</sup> = Ph) gave 100% kill of *Cyperus difformis*, *Scirpus junco*ides, and *Monochoria vaginalis* after 2 wks.

IT 63684-27-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of herbicidal isothiazolinones)

RN 63684-27-5 CAPLUS

CN Butanoic acid, 3,3'-dithiobis- (CA INDEX NAME)

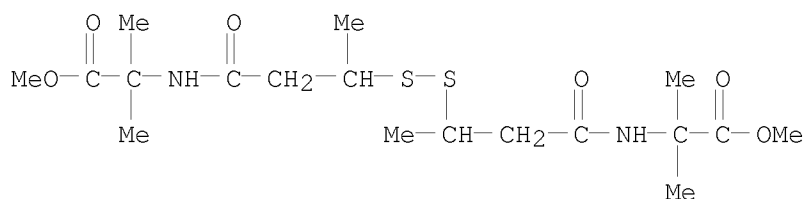


IT 199466-54-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of herbicidal isothiazolinones)

RN 199466-54-1 CAPLUS

CN 2-Oxa-9,10-dithia-5,14-diazahexadecan-16-oic acid, 4,4,8,11,15,15-hexamethyl-3,6,13-trioxo-, methyl ester (9CI) (CA INDEX NAME)





L27 ANSWER 91 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:745500 CAPLUS

DOCUMENT NUMBER: 128:99527

ORIGINAL REFERENCE NO.: 128:19413a,19416a

TITLE: Chemoenzymic synthesis of fluorescent N-Ras lipopeptides and their use in membrane localization studies in vivo

AUTHOR(S): Waldmann, Herbert; Schelhaas, Michael; Nagele, Edgar; Kuhlmann, Jurgen; Wittinghofer, Alfred; Schroeder, Hans; Silviu, John R.

CORPORATE SOURCE: Inst. Org. Chem., Univ. Richard-Willstätter-Allee, Karlsruhe, D-76128, Germany

SOURCE: Angewandte Chemie, International Edition in English (1997), 36(20), 2238-2241

CODEN: ACIEAY; ISSN: 0570-0833

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 128:99527

AB The authors report on an efficient method for the synthesis of fluorescent-labeled lipopeptides and on their application in the study of the specific membrane localization of lipopeptides and lipoproteins by means of membrane fusion/fluorescence microscopy and microinjection/confocal laser fluorescence microscopy.

IT 201407-28-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

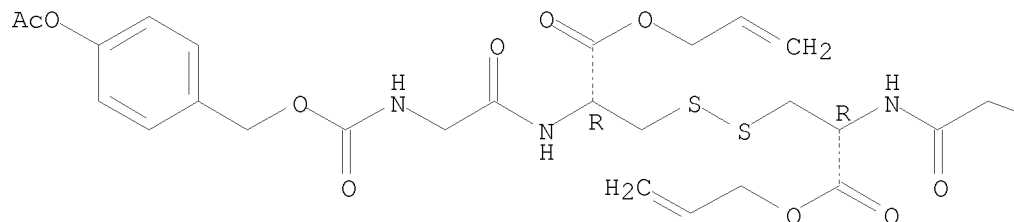
(chemoenzymic synthesis of fluorescent N-Ras lipopeptides and their use in membrane localization studies in vivo)

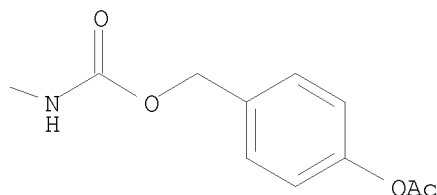
RN 201407-28-5 CAPLUS

CN L-Cysteine, N-[[[4-(acetyloxy)phenyl]methoxy]carbonyl]glycyl-, 2-propenyl ester, bimol. (2→2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

PAGE 1-A





REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

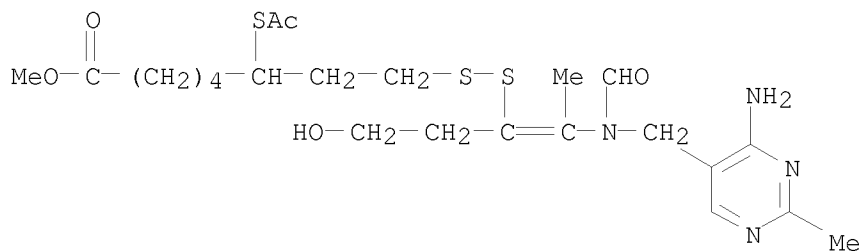
L27 ANSWER 92 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:745014 CAPLUS  
 DOCUMENT NUMBER: 128:53132  
 ORIGINAL REFERENCE NO.: 128:10313a,10316a  
 TITLE: Refining crystallization of Octotiamine  
 AUTHOR(S): Yoshino, Toshitaka; Momonaga, Masashi; Shinozaki, Katsuhiko; Yazawa, Hisatoyo  
 CORPORATE SOURCE: Manufacturing Technology Laboratories, Fujisawa Pharmaceutical Co., Ltd., Osaka, 532, Japan  
 SOURCE: Kagaku Kogaku Ronbunshu (1997), 23(6), 906-913  
 CODEN: KKRBAW; ISSN: 0386-216X  
 PUBLISHER: Kagaku Kogaku Kyokai  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese

AB Most medical suppliers which are obtained as purified crystals are produced in the form of tablets mixed with additives before dosing. The most important property for such medical supplies is to control the elution rate of tablets appropriately. The elution rate changes according to the internal structure, crystal size, affinity with additives and other factors. To develop such a complex, compound tablet, crystallization of Octotiamine was carried out and the crystallization method and conditions that produced the optimum tablet are established. Furthermore, we examine scale-up factors for this crystallization process.

IT 137-86-0P, Octotiamine  
 RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (refining crystallization of Octotiamine for use in tablets)

RN 137-86-0 CAPLUS

CN Octanoic acid, 6-(acetylthio)-8-[[2-[[[(4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]-1-(2-hydroxyethyl)-1-propen-1-yl]dithio]-, methyl ester (CA INDEX NAME)



L27 ANSWER 93 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:723964 CAPLUS  
 DOCUMENT NUMBER: 127:319273

ORIGINAL REFERENCE NO.: 127:62580h,62581a  
 TITLE: Serine-Based Cyclodepsipeptides on an Adamantane Building Block: Design, Synthesis, and Characterization of a Novel Family of Macrocyclic Membrane Ion-Transporting Depsipeptides  
 AUTHOR(S): Ranganathan, Darshan; Haridas, V.; Madhusudanan, K. P.; Roy, Raja; Nagaraj, R.; John, G. B.  
 CORPORATE SOURCE: Biomolecular Research Unit, Regional Research Laboratory (CSIR), Trivandrum, 695019, India  
 SOURCE: Journal of the American Chemical Society (1997), 119(48), 11578-11584  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 127:319273  
 GI

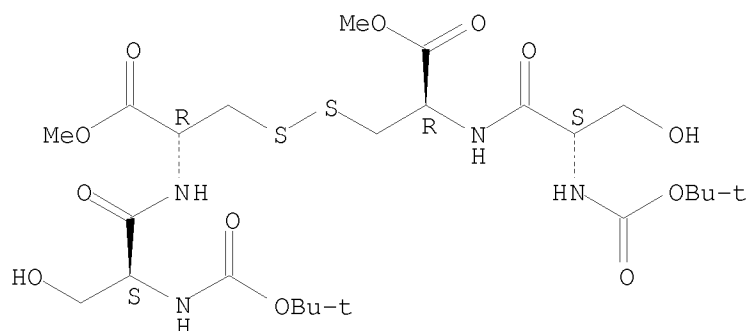
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A simple two-step synthetic strategy provides a straightforward entry to a large variety of adamantane-containing serine-based cyclodepsipeptides. The design is flexible with respect to the choice of an amino acid, the ring size, and the nature of the template as illustrated here with the preparation of a large variety of serine-based macrocycles, for example, 18-membered simple cyclo(Adm-Ser)<sub>2</sub> (I), 24-membered macrocycles II (R = CHMe<sub>2</sub>, CH<sub>2</sub>CHMe<sub>2</sub>; R<sub>1</sub> = OMe; R = CHMe<sub>2</sub>, R<sub>1</sub> = Leu-OMe), a 21-membered S-S bridged cystine macrocycle, a pyridine-containing macrocycle, and a crown ether hybrid macrocycle that provide built-in handles (in the form of protected NH<sub>2</sub> and CO<sub>2</sub>H groups) for attachment of suitable pendants leading to attractive models that may have multiple uses as membrane ionophores, scaffolds, or templates in the design of artificial proteins and for studying the structure-function relationship in biol. receptors. This novel class of macrocyclic peptides are demonstrated to adopt β-turn type conformation and possess high efficiency in transporting Na<sup>+</sup>, Ca<sup>2+</sup>, and Mg<sup>2+</sup> ions across model membranes. Amongst the cyclodepsipeptides reported here, the 24-membered macrocycle II (R = CHMe<sub>2</sub>, R<sub>1</sub> = Leu-OMe) was the most efficient ion-transporter in lipid bilayer membranes. Interestingly, no appreciable ion-transport was noticed by 18-membered cyclodepsipeptide I and by macrocycles possessing only one adamantane unit in their cyclic framework. These results show that a min. of two adamantane units in a 24-membered ring size appears to be the optimum requirement for efficient membrane ion transport.

IT 197706-98-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (design, preparation, and characterization of macrocyclic membrane ion-transporting cyclodepsipeptides based on serine and adamantane building blocks)

RN 197706-98-2 CAPLUS  
 CN L-Cysteine, N-[(1,1-dimethylethoxy)carbonyl]-L-seryl-, methyl ester, bimol. (2→2')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L27 ANSWER 94 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:720551 CAPLUS

DOCUMENT NUMBER: 127:358545

ORIGINAL REFERENCE NO.: 127:70187a, 70190a

TITLE: Reactivity in monolayers versus bulk media: intra- and intermolecular aminolysis of esters

AUTHOR(S): Chechik, Victor; Stirling, Charles J. M.

CORPORATE SOURCE: Centre for Molecular Materials, University of Sheffield, Sheffield, S3 7HF, UK

SOURCE: Langmuir (1997), 13(24), 6354-6356

CODEN: LANGD5; ISSN: 0743-7463

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Monolayers containing reactive amino and p-nitrophenyl-ester functional groups at the same or different levels with respect to the monolayer interface were self-assembled on a gold surface. Intramol. reactions in these monolayers are  $\geq 1000$  times slower than the same processes in the bulk medium. Control expts. with external reagents showed that the monolayer p-nitrophenyl ester group reacts readily with amines from solution, whereas the nucleophilicity of the monolayer amino functionality is significantly suppressed. This unusually low reactivity of the amino group was tentatively assigned to its interaction with the Au surface.

IT 198569-70-9 198569-72-1 198569-74-3

198569-75-4 198569-76-5 198569-77-6

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(reactivity in monolayers vs. bulk media in intra- and intermol. aminolysis of esters)

RN 198569-70-9 CAPLUS

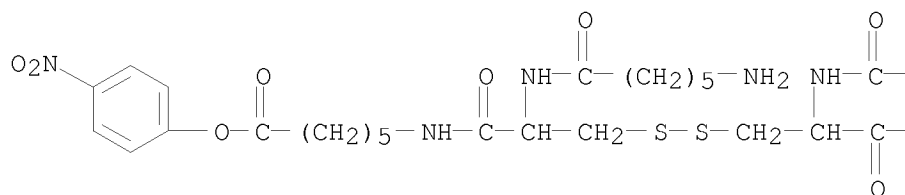
CN Hexanoic acid, 6,6'-[dithiobis[[2-[(6-amino-1-oxohexyl)amino]-1-oxo-3,1-propanediyl]imino]]bis-, bis(4-nitrophenyl) ester, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

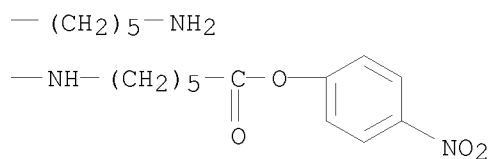
CM 1

CRN 198569-69-6

CMF C42 H62 N8 O12 S2

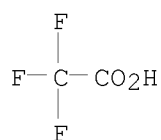
PAGE 1-A





CM 2

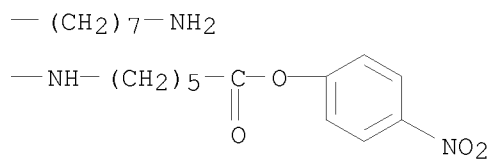
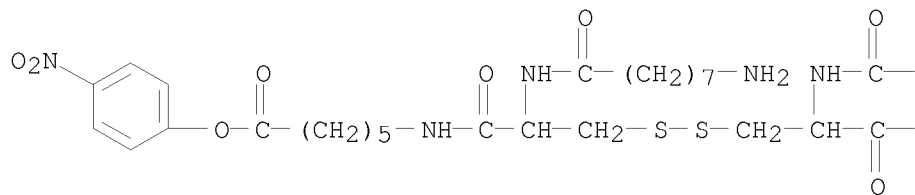
CRN 76-05-1  
CMF C2 H F3 O2



RN	198569-72-1	CAPLUS
CN	Hexanoic acid, 6,6'-[dithiobis[[2-[(8-amino-1-oxooctyl)amino]-1-oxo-3,1-propanediyl]imino]]bis-, bis(4-nitrophenyl) ester, bis(trifluoroacetate) (9CI) (CA INDEX NAME)	

CM 1

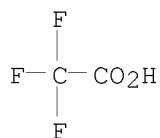
CRN 198569-71-0  
CMF C46 H70 N8 O12 S2



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 198569-74-3 CAPLUS

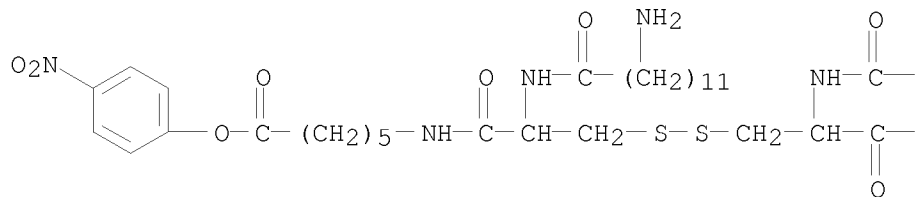
CN Hexanoic acid, 6,6'-[dithiobis[[2-[(12-amino-1-oxododecyl)amino]-1-oxo-3,1-propanediyl]imino]]bis-, bis(4-nitrophenyl) ester, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 198569-73-2

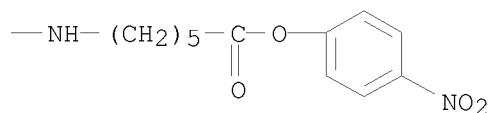
CMF C54 H86 N8 O12 S2

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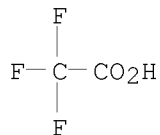
— (CH2)11—NH2



CM 2

CRN 76-05-1

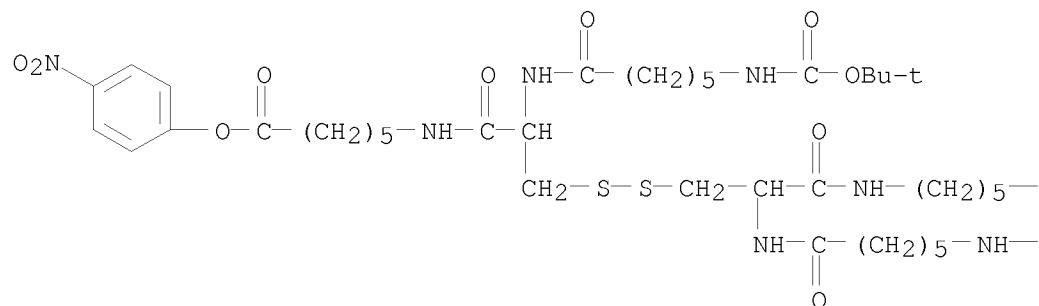
CMF C2 H F3 O2



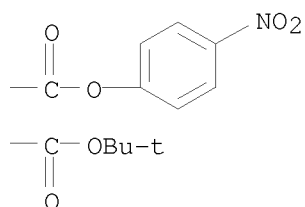
RN 198569-75-4 CAPLUS

CN 12,13-Dithia-2,9,16,23-tetraazatetracosanedioic acid, 10,15-bis[[[6-(4-nitrophenoxy)-6-oxohexyl]amino]carbonyl]-8,17-dioxo-, 1,24-bis(1,1-dimethylethyl) ester (CA INDEX NAME)

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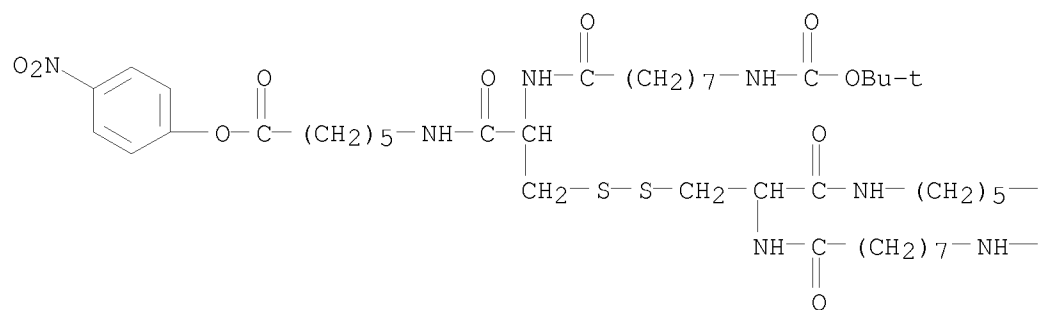
PAGE 1-B



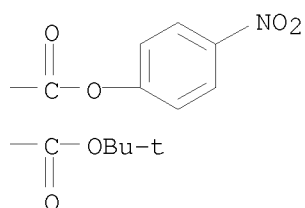
RN 198569-76-5 CAPLUS

CN 14,15-Dithia-2,11,18,27-tetraazaooctacosanedioic acid, 12,17-bis[[[6-(4-nitrophenoxy)-6-oxohexyl]amino]carbonyl]-10,19-dioxo-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

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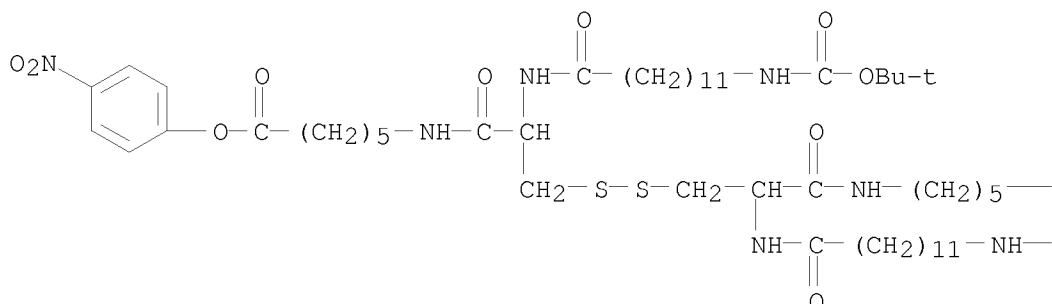


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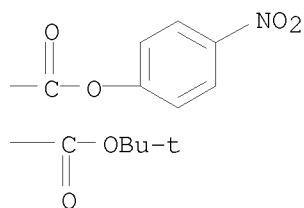


RN 198569-77-6 CAPLUS  
 CN 18,19-Dithia-2,15,22,35-tetraazahexatriacontanedioic acid,  
 16,21-bis[[[6-(4-nitrophenoxy)-6-oxohexyl]amino]carbonyl]-14,23-dioxo-,  
 1,36-bis(1,1-dimethylethyl) ester (CA INDEX NAME)

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L27 ANSWER 95 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:708509 CAPLUS  
 DOCUMENT NUMBER: 128:1269  
 ORIGINAL REFERENCE NO.: 128:287a,290a  
 TITLE: Efficient Chemical Introduction of a Disulfide  
 Cross-Link and Conjugation Site into Human Hemoglobin  
 at  $\beta$ -Lysine-82 Utilizing a Bifunctional Aminoacyl  
 Phosphate  
 AUTHOR(S): Kluger, Ronald; Li, Xianfeng  
 CORPORATE SOURCE: Lash Miller Laboratories Department of Chemistry,  
 University of Toronto, Toronto, ON, M5S 3H6, Can.  
 SOURCE: Bioconjugate Chemistry (1997), 8(6), 921-926  
 CODEN: BCCHE; ISSN: 1043-1802  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The creation of a cross-link containing a disulfide into Hb has been accomplished with a site-directed reagent, N,N'-bis(Cbz-cystinyl)bis(Me phosphate) (1). This is prepared from the reaction of the bis acid chloride of N-protected cystine with di-Me phosphate followed by O-demethylation with Me iodide in acetone. Reaction with deoxyHb produces two main products: cross-linked Hb as the bis(cystinyl amide) of the  $\epsilon$ -amino group of the side chain of Lys-82 of the two  $\beta$  subunits as well as material that has each of the same amino groups modified as the cysteinyl amide but not cross-linked. Addition of 2-mercaptoethanol cleaves the disulfide in the material that is not cross-linked while leaving the disulfide intact in the cross-linked



species. Dithiothreitol reduces the disulfide in the cross-linked species as well as in the species that is not cross-linked. Spontaneous oxidation in air converts all of the reduced material to the cross-linked bis(cystinyl amide) of Hb. The reagent permits controlled introduction of cystinyl groups at lysyl residues, leading to formation of sulfhydryl groups by reduction and the possibility of re-forming the cross-links or forming conjugates.

IT 40470-28-8 198978-59-5

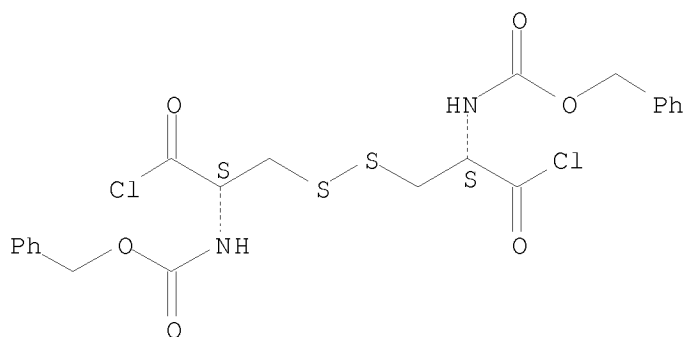
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)

(efficient chemical introduction of a disulfide cross-link and conjugation site into human Hb at  $\beta$ -lysine-82 utilizing a bifunctional aminoacyl phosphate)

RN 40470-28-8 CAPLUS

CN 2-Oxa-7,8-dithia-4,11-diazadodecan-12-oic acid, 5,10-bis(chlorocarbonyl)-3-oxo-1-phenyl-, phenylmethyl ester, [S-(R\*,R\*)]- (9CI) (CA INDEX NAME)

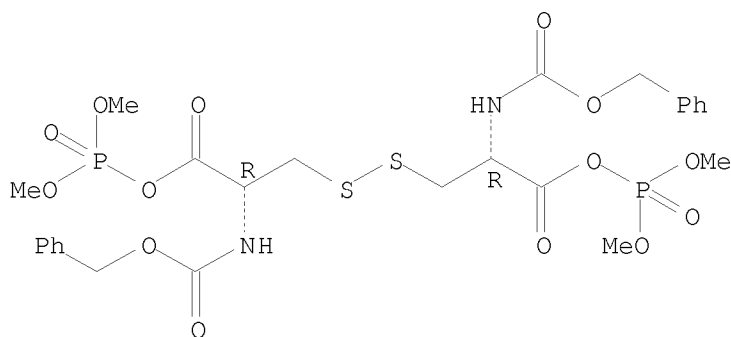
Absolute stereochemistry.



RN 198978-59-5 CAPLUS

CN 2,4-Dioxa-8,9-dithia-12-aza-3-phosphatridecan-13-oic acid, 11-[[[(dimethoxyphosphinyl)oxy]carbonyl]-3-methoxy-5-oxo-6-[[[(phenylmethoxy)carbonyl]amino]-, phenylmethyl ester, 3-oxide, (6R,11R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 96 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:707655 CAPLUS

DOCUMENT NUMBER: 128:54573

ORIGINAL REFERENCE NO.: 128:10557a,10560a

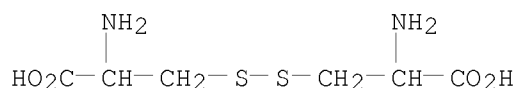
TITLE: Electrochemical oxidation of L-cysteine catalyzed by 10-ethylphenothiazine

AUTHOR(S): Tong, Jian; Nie, Meng-yan; Li, Hu-lin  
 CORPORATE SOURCE: Chemistry Department, Lanzhou University, Lanzhou, 730000, Peop. Rep. China  
 SOURCE: Journal of Electroanalytical Chemistry (1997), 433(1-2), 121-126  
 CODEN: JECHE5  
 PUBLISHER: Elsevier  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The electrochem. oxidation of L-cysteine catalyzed by 10-ethylphenothiazine at a glassy C electrode in 0.1 M NaClO<sub>4</sub> Ethanol + water (1:1, volume/volume) solution was studied. Cystine was the oxidation product which was verified by melting-point measurement and thin layer chromatog. The rate constant for the catalytic reaction was evaluated as  $(1.59 \pm 0.05) \times 10^3 \text{ M}^{-1} \text{ s}^{-1}$  by chronoamperometry. The 10-ethylphenothiazine cation radical produced by electrochem. oxidation of neutral 10-ethylphenothiazine is stable in either acidic or neutral solns. of KCl, NH<sub>4</sub>Cl and NaClO<sub>4</sub>. Exptl. conditions, which maximize the current efficiency of this electrochem. oxidation, such as pH value and the concentration of the catalyst, were also studied and discussed.

IT 923-32-0, Cystine  
 RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); FORM (Formation, nonpreparative); PROC (Process)  
 (electrochem. oxidation of L-cysteine catalyzed by 10-ethylphenothiazine on glassy carbon electrode in different electrolytes)

RN 923-32-0 CAPLUS  
 CN Cystine (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 97 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:678655 CAPLUS  
 DOCUMENT NUMBER: 127:311463  
 ORIGINAL REFERENCE NO.: 127:60833a,60836a  
 TITLE: Solid pharmaceutical compositions of vitamin B1 derivatives  
 INVENTOR(S): Azuma, Mie; Nakagawa, Yasuo; Takahashi, Masato; Maki, Toru; Mizutani, Takashi  
 PATENT ASSIGNEE(S): Taisho Pharmaceutical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09268127	A	19971014	JP 1996-78909	19960401
PRIORITY APPLN. INFO.:			JP 1996-78909	19960401

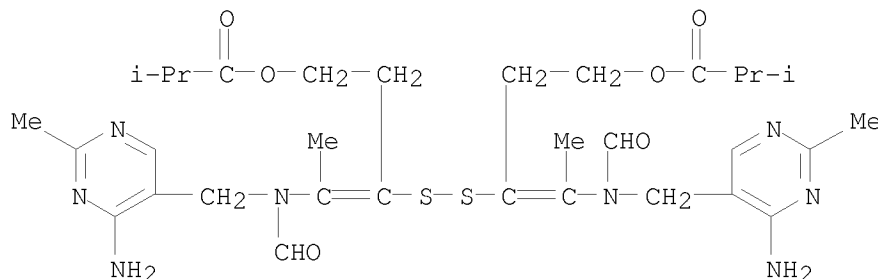
AB Solid pharmaceutical compns. of vitamin B1 derivs. showing storage stability comprise vitamin B1 derivs. 1, starch 0.01-10 weight parts and calcium phosphate.

IT 3286-46-2, Bisibutiamine  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(solid pharmaceutical compns. of vitamin B1 derivs. containing starch and calcium phosphate as stabilizers)

RN 3286-46-2 CAPLUS

CN Propanoic acid, 2-methyl-, 1,1'-[dithiobis[3-[1-[[4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]ethylidene]-3,1-propanediyl]] ester (CA INDEX NAME)



L27 ANSWER 98 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:658118 CAPLUS

DOCUMENT NUMBER: 127:298818

ORIGINAL REFERENCE NO.: 127:58307a,58310a

TITLE: Simultaneous determination of the components in an anti-cold drug by gradient HPLC

AUTHOR(S): Masuda, Mitsuhiro; Satoh, Tomoko; Handa, Mitsuichi; Itoh, Yuji; Sagara, Kazuhiko

CORPORATE SOURCE: OTC Res. Cent., Taisho Pharm. Co., Ltd., Omiya, 330, Japan

SOURCE: Bunseki Kagaku (1997), 46(10), 777-783

CODEN: BNSKAK; ISSN: 0525-1931

PUBLISHER: Nippon Bunseki Kagakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Nine components in the preparation, such as acetaminophen, anhydrous caffeine, riboflavin, dihydrocodeine phosphate, DL-methylephedrine hydrochloride, carbinoxamine maleate, noscaphine, bisibutiamine and bromhexine hydrochloride, could be completely separated by changing from water-acetonitrile (95:5) to water-acetonitrile (1:1) as the mobile phase containing 0.1% of phosphoric acid and 0.08 weight/volume% of sodium heptanesulfonate by a linear gradient program. The time required for the anal. was about 40 min, and the time for initializing was about 15 min. Under this method, the recoveries of these components were 99.9-100.4%, and showed good reproducibility for each component. The results of the determination were in good agreement with the conventional method.

IT 3286-46-2, Bisibutiamine

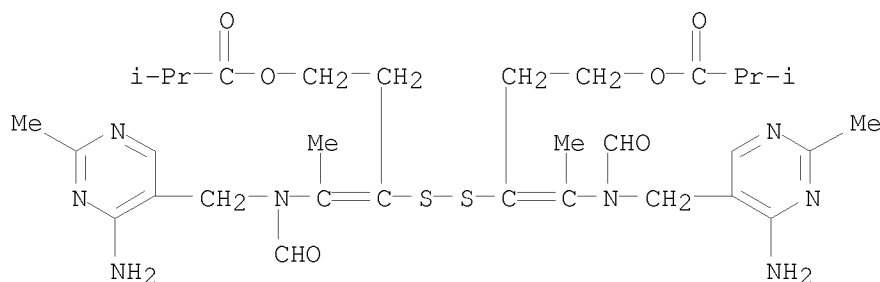
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)

(simultaneous determination of components in anti-cold drug by gradient

HPLC)

RN 3286-46-2 CAPLUS

CN Propanoic acid, 2-methyl-, 1,1'-[dithiobis[3-[1-[[4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]ethylidene]-3,1-propanediyl]] ester (CA INDEX NAME)



L27 ANSWER 99 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:637940 CAPLUS

DOCUMENT NUMBER: 127:278026

ORIGINAL REFERENCE NO.: 127:54297a, 54300a

TITLE: Enantioselective reduction of prochiral ketones

catalyzed by oxazaborolidine derived from L-cystine

AUTHOR(S): Li, Xing Shu; Zhang, Xiao Ling; Xie, Ru Gang

CORPORATE SOURCE: Dep. Chem., Sichuan Union Univ., Chengdu, 610064, Peop. Rep. China

SOURCE: Chinese Chemical Letters (1997), 8(8), 679-680

CODEN: CCLEE7; ISSN: 1001-8417

PUBLISHER: Chinese Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:278026

AB Enantioselective reduction of prochiral ketones to secondary alcs. in good to excellent optical yields via in situ formation of oxazaborolidines derived from L-cystine was described. Acetophenone was reduced with  $\text{BH}_3\cdot\text{THF}$  in the presence of (R)-PhSCH<sub>2</sub>CH(NH<sub>2</sub>)C(Ph)<sub>2</sub>OH or (R,R)-[-SCH<sub>2</sub>CH(NH<sub>2</sub>)C(Ph)<sub>2</sub>OH]<sub>2</sub> followed by treatment with HCl in MeOH to form (R)- $\alpha$ -methylbenzenemethanol.  $\alpha$ -Bromoacetophenone was similarly reduced to form (S)- $\alpha$ -(bromomethyl)benzenemethanol.

IT 195443-91-5P

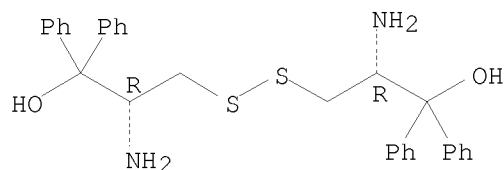
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(enantioselective reduction of prochiral ketones catalyzed by in situ formation of oxazaborolidines derived from L-cystine)

RN 195443-91-5 CAPLUS

CN Benzenemethanol,  $\alpha,\alpha'$ -[dithiobis(1-amino-2,1-ethanediyl)]bis[ $\alpha$ -phenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 100 OF 2810 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:623187 CAPLUS

DOCUMENT NUMBER: 127:263065

ORIGINAL REFERENCE NO.: 127:51389a, 51392a

TITLE: Preparation of di- or tripeptide derivatives as analgesics

INVENTOR(S): Ogino, Koichi; Kanemoto, Naohide; Kuwahara, Maki;  
Muneoka, Yojiro; Aimoto, Saburo; Adachi, Masakazu  
PATENT ASSIGNEE(S): Otsuka Pharmaceutical Co., Ltd., Japan  
SOURCE: PCT Int. Appl., 122 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9733907	A1	19970918	WO 1997-JP751	19970310
W: AU, BR, CA, CN, JP, KR, MX, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9722334	A	19971001	AU 1997-22334	19970310
PRIORITY APPLN. INFO.:			JP 1996-53353	A 19960311
			WO 1997-JP751	W 19970310

OTHER SOURCE(S): MARPAT 127:263065

AB Tri- or tetra-peptide derivs. represented by the general formula  
X1(R)-X2-X3-X4-A [X1 = Asn, Gln, His, Ser, Thr, Cys; X2 = Gln, Met, Leu,  
Arg, His, Gly, Thr or Cys; X3 = Trp, Tyr, Leu, Met, Arg, Gln, Glu, Asn,  
Ala, Asp, Ser, Phe, Ile, Pro, Gly, His, Lys, Thr, Val, Cys; X4 = a single  
bond, Trp, Ala, Val, Gly, Thr, Met, Phe, Leu, Lys, Arg, Asn, Asp, Gln,  
Glu, His, Ile, Pro, Ser, Cys; R = a functional group having a benzene  
ring; A = a C-terminal free carboxyl (OH) or amide (NH<sub>2</sub>) group, or a  
substituted functional group derived therefrom] are prepared Thus,  
H-Asn(CPh<sub>3</sub>)-Gln-Trp-NH<sub>2</sub>, which was prepared by the solution phase method  
starting from Z-Trp-OH, in vitro induced the contraction of guinea pig's  
ileum at 10-8 M and in vivo showed analgesic effect in a tail-pinch method  
using mice at 2 µg/body.

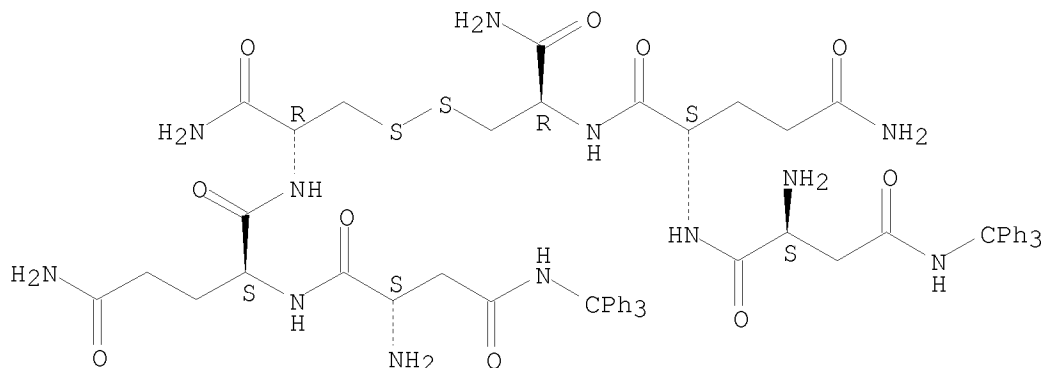
IT 196199-72-1P 196199-74-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);  
BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of di- or tripeptide derivs. as analgesics)

RN 196199-72-1 CAPLUS

CN L-Cysteinamide, N-(triphenylmethyl)-L-asparaginyl-L-glutaminyL-, bimol.  
(3→3')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

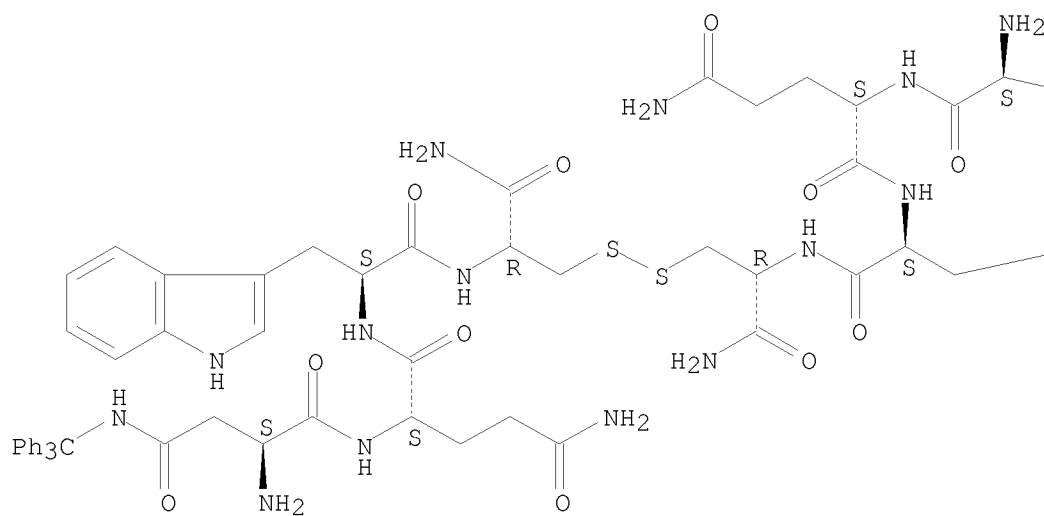


RN 196199-74-3 CAPLUS

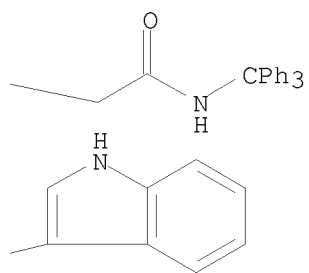
CN L-Cysteinamide, N-(triphenylmethyl)-L-asparaginyl-L-glutaminyL-L-  
tryptophyl-, bimol. (4→4')-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B



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